UNITED STATES CIVIL DEFENSE

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LETTER OF TRANSMITTAL

SEPTEMBER 8, 1950.

THE HONORABLE HARRY S. TRUMAN,
The White House.

DEAR MR. PRESIDENT: I submit to you herewith a plan for organizing the civil defense of the United States.

Adequate civil defense will require the interest and effort of hundreds of thousands of our people, contributed for the most part on a voluntary basis.

These citizens will get little material return. Their interest and effort at this time, however, will be both wise and prudent, because until effective international control exists over the use of modern weapons which can devastate our towns and cities, we must put into action those precautionary measures which past experience and new tests have shown would save thousands of lives in case of attack.

Such a program is needed. It will be expensive. We are working on the budget details of that cost, and will present them to you for your consideration as soon as they are available.

This report provides an outline of the organization and techniques which should be developed by the State and local communities on whom rest the primary responsibility for civil defense.

The plan presented here builds upon the wartime experience of Great Britain and Germany, as well as upon previous planning undertaken by agencies of the United States Government. In particular, it embraces material from the report entitled "Civil Defense for National Security" (Hopley Report) issued by the Department of Defense.

Contributions to this report have been made by many individuals, representing a number of Federal agencies; and also by organizations outside the Government. To all these people we express our appreciation.

The plan recommends a basic civil defense law, the establishment of a Civil Defense Administration, and the appointment of an Administrator.

Part I

INTRODUCTION

BECAUSE of developments in this air-atomic age, the United States can no longer be free from the danger of a sudden devastating attack against the homeland.

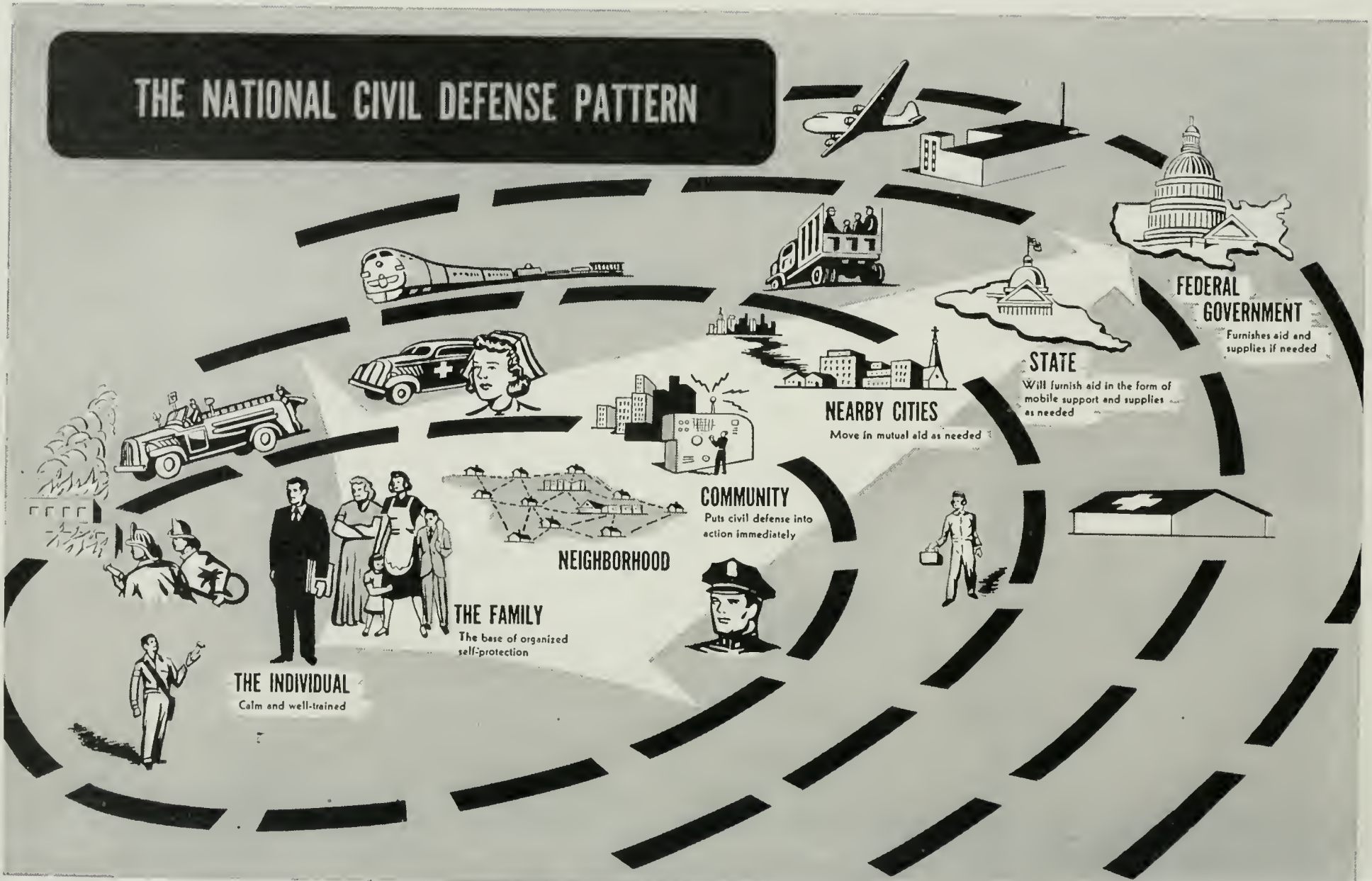
The greatest deterrent to such attack is the knowledge on the part of a would-be aggressor that we have the power to destroy him by retaliatory action.

Since there can be no absolute military defense, an effective civil defense is vital to the future security of the United States because it might provide the means whereby this country, if suddenly attacked heavily and without warning, could get up off the floor to fight back.

An enemy attack would presumably be aimed at the great metropolitan areas, at the cities and towns, at the country's most critical targets.

Such an attack would be against all the people of the United States, and therefore defense against it must require the coordinated effort of the whole Nation.

It is expected that such an attack would be partially successful. Whether it would succeed in destroying America's productive power would depend in the main on the organization and functional efficiency of the country's civil defense. This vital service has been a missing element in our system of national security.


THE NATIONAL CIVIL DEFENSE PATTERN
FEDERAL GOVERNMENT
Furnishes aid and supplies if needed
STATE
Will furnish aid in the form of mobile support and supplies as needed
NEARBY CITIES
Move in mutual aid as needed
COMMUNITY
Puts civil defense into action immediately
NEIGHBORHOOD
THE FAMILY
The base of organized self-protection
THE INDIVIDUAL
Calm and well-trained

POLICY AND RESPONSIBILITY

THE national security structure of the United States becomes complete with the establishment of adequate civil defense. Until wars are effectually outlawed, civil defense must take its place along with military defense in any sound and well-rounded program.

Civil defense can be defined as the protection of the home front by civilians acting under civil authority to minimize casualties and war damage and preserve maximum civilian support of the war effort.

With the military establishment expanding, and with the industrial facilities of the Nation being geared to that expansion, the drain upon America's resources will necessarily be great. Plans for civil defense, therefore, must be made with full recognition of the importance of maximum economy in the use of the available supply of men, money, and materials.

PRINCIPLES

Civil defense rests upon the principle of self-protection by the individual, extended to include mutual self-protection on the part of groups and communities. Manned largely by unpaid part-time volunteer workers, each service of civil defense will work in cooperation with the others for the common good. All men and women who make up these services will belong to a national team—The United States Civil Defense Corps.

As the late Russell Hopley said in a letter forwarding his excellent report to the late Secretary Forrestal:

"In the event of a future war, which might come to our shores, all of the people, all of the facilities, and all of the skills and energies of the Nation must be utilized to the fullest extent. To successfully carry out this program will require the cooperation of every man, woman, and child in this Nation. It is on such principles that civil defense must be

erected and it must be with such a requirement that its organization be perfected."

Civil defense is conceived as a system which will depend largely on cooperation between critical target areas and the communities around them. To make every critical target community completely dependent upon its own resources would dislocate the national economy and jeopardize the rest of the defense effort. A system of support from surrounding areas within each State is far more realistic, because it does not call for a tremendous procurement program, or an unusual drain on men, money, and materials. Instead, it provides for the organized use of existing equipment, following the principle that location is more important than quantity. The strategy is to organize for this type of support on a Nation-wide basis.

Within target areas considered critical the same principle will apply, with individual and family self-protection being supplemented by the organized civil-defense services in all parts of the community. Civil-defense teams and equipment, strategically dispersed in outlying parts of the city, will move immediately into stricken areas, and help the residents combat the effects of the attack.

The strategy as outlined is for use in civil-defense operations after attack. Another strategy affecting designated target areas throughout the Nation relies on combined and related programs in preattack action to reduce materially the magnitude of disaster.

With early warning of possible attack, partial evacuation from critical target areas may be considered.

With an effective air raid warning service, the population can take cover in preconstructed personnel shelters until the danger has passed.

These advance actions, combined with prompt and effective post-attack actions, would reduce casualties to a small percentage of what they otherwise would be.

RESPONSIBILITIES

The basic operating responsibility for civil defense is in the individual and his local government. The individual, given all training possible, does what he can for himself in an emergency. The family unit, similarly trained, attacks its own problems while also contributing to the organized community effort. The community's civil-defense or-

ganization works to meet its own crisis, receiving outside help if its facilities are inadequate, or contributing support to neighboring communities under organized State direction. In order to help communities carry out their responsibility, the State and Federal Governments contribute assistance in organizational advice, over-all planning, and resources.

The Federal Government cannot and should not operate the State and local civil-defense systems with Federal employees. The States are established with inherent powers and accompanying responsibility, and have clear qualifications to coordinate civil-defense operations within their boundaries, and in emergency to direct them. Similarly, the cities, counties, and towns are best qualified to handle their own operating functions.

FEDERAL RESPONSIBILITY

The responsibility of the Federal Government is to establish a national civil-defense plan with accompanying policy, and to issue informational and educational material about both. The Federal Government will provide courses and facilities for schooling and training, provide coordination of interstate operations, furnish some of the essential equipment, and advise the States concerning the establishment of stockpiles of medical and other supplies needed at the time of disaster.

In matters of civil defense, the Federal Government will deal directly with the State, i. e., with the governor, or if he so delegates, with the civil-defense director.

STATE RESPONSIBILITY

The responsibility of the State government is to provide leadership and supervision in all planning for civil defense, and direction of supporting operations in an emergency. The State is the key operating unit. It is the "field army" of civil defense. Its counties or cities are its "divisions." When one or more divisions are hard hit, the remaining ones are sent in for support—over and above the capabilities of local self-help and mutual aid.

In addition, the State should participate in interstate planning and operations in collaboration with the Federal Government, provide supervision, instructors, and facilities for appropriate training pro-

grams, assume its share of financial responsibility, and accept and allocate such Federal funds, supplies, or equipment as may be provided for the counties, cities, and towns.

LOCAL RESPONSIBILITY

The responsibility of the city or county is to operate its civil-defense system under appropriate ordinances under the guidance of the State, and make such mutual-aid pacts and other arrangements with neighboring communities as are considered necessary; also provide adequate staff and facilities for training, assume its share of financial responsibility, and participate in the State program of organized mobile support.

THE CIVIL DEFENSE PLAN

The plan presented is the culmination of extensive thinking and planning for civil defense that has been going on in the world for the past 10 years. Condensed in its pages are conclusions derived from the study of experience in the countries that were the practical laboratories of civil defense during World War II, and from the postwar planning of scores of other nations.

Full use has been made of the experiences of the Office of Civilian Defense and State defense organizations during the past war, and of the work of the Office of Civil Defense Planning in the Department of Defense. Much valuable material has been drawn from the War Department Civil Defense Board report, and the later and more comprehensive report "Civil Defense for National Security" (Hopley Report) issued in 1948 by the Office of Civil Defense Planning.

The civil-defense plan is offered in three parts.

Part I presents over-all policy, basic concepts, and basic responsibilities.

Part II presents the specific functions of civil defense necessary to fulfill the strategic concepts described above. These chapters describe the individual services necessary to the operation of civil defense and analyze the services already existing in normal peacetime governmental structure.

Part III translates policy and concepts into operation. It answers those State and city officials who are asking "How do we start?" and serves as a check list to those whose programs are already started.

Civil defense, during an immediate post attack period, will assume many responsibilities that must be relinquished as soon as established agencies of the Government can take over. As examples: emergency medical care will be translated into long-term convalescence of the injured; emergency shelter and emergency engineering services will evolve into a restoration program for housing, public works, and public utilities. It is not possible to state the exact length of time during which civil defense will retain responsibility, since the time will depend on the nature and extent of the disaster. However, appropriate agencies at all levels of Government should be prepared to take over their responsibilities at the earliest moment.

The most important goal of the Government and the community is the prompt, orderly restoration of normal community life, thereby preserving maximum civilian morale and support of the war effort.

PARTICIPATION

Every person and every community has a part to play in the civil defense program. Remoteness from places considered probable targets does not exempt any community from playing its part in the over-all program, since evacuee reception and care must be planned, and a support program organized.

The civil defense program for this country must be in constant readiness because for the first time in 136 years an enemy has the power to attack our cities in strong force, and for the first time in our history that attack may come suddenly, with little or no warning.

Granted a few minutes warning, casualties could be reduced by over 50 percent through proper organization and training in civil defense. More important, civil defense could spell the difference between defeat with slavery for our people and victory in a war thrust upon us.

APPLICATION OF CIVIL DEFENSE PLANNING

THE outcome of two world wars has been decided by the weight of American industrial production in support of a determined fighting force.

In any future war, it is probable that an enemy would attempt at the outset to destroy or cripple the production capacity of the United States and to carry direct attack against civilian communities to disrupt support of the war effort.

This assumption constitutes the basic reasoning behind the necessity for civil defense. An enemy could not attack all urban areas throughout the United States, but he could attack any community in the United States.

Attacks would be planned against points which would cause greatest strategic damage.

The probability that certain areas are more likely to be attacked than others does not reduce the responsibility of the communities less likely to be attacked to organize for civil defense. It does serve to indicate how they should organize.

The considerations which determine profitable targets are understood by potential enemies as well as our own planners. Such considerations include total population, density of population, concentration of important industries, location of communication and transportation centers, location of critical military facilities, and location of civil governments.

Weighing such considerations, the Federal Government has decided what areas in the United States are more likely to be attacked than others, not as a firm prediction but as a sound basis for Nation-wide civil defense planning.

These areas are designated "critical target areas." They are being indicated to the Governors of all States for their guidance in the exercise of their civil-defense responsibilities. Accompanying this information

will be appropriate advice on civil defense measures. Revisions may be necessary from time to time, and future Federal assistance in planning and operational support will be provided.

No city or metropolitan area can be expected to provide completely for its own self-protection or recovery after attack. In fact, such provisions are unnecessary and are less practicable in actual operation than a properly organized system of intercommunity assistance (mutual aid) and State-directed support (mobile support) in which the existing resources of the State mobilize for the common protection.

In view of these considerations, the State-supervised plan for civil defense should aim to:

1. Organize critical target areas to meet emergency conditions anticipated under an atomic bomb attack. This type of organization would include all existing elements of local civil government and facilities, protective services not included in peacetime civil organization, and mutual aid. These types of services are described in part II.

2. Organize mobile support in the support areas, which are of equal importance to critical target areas.

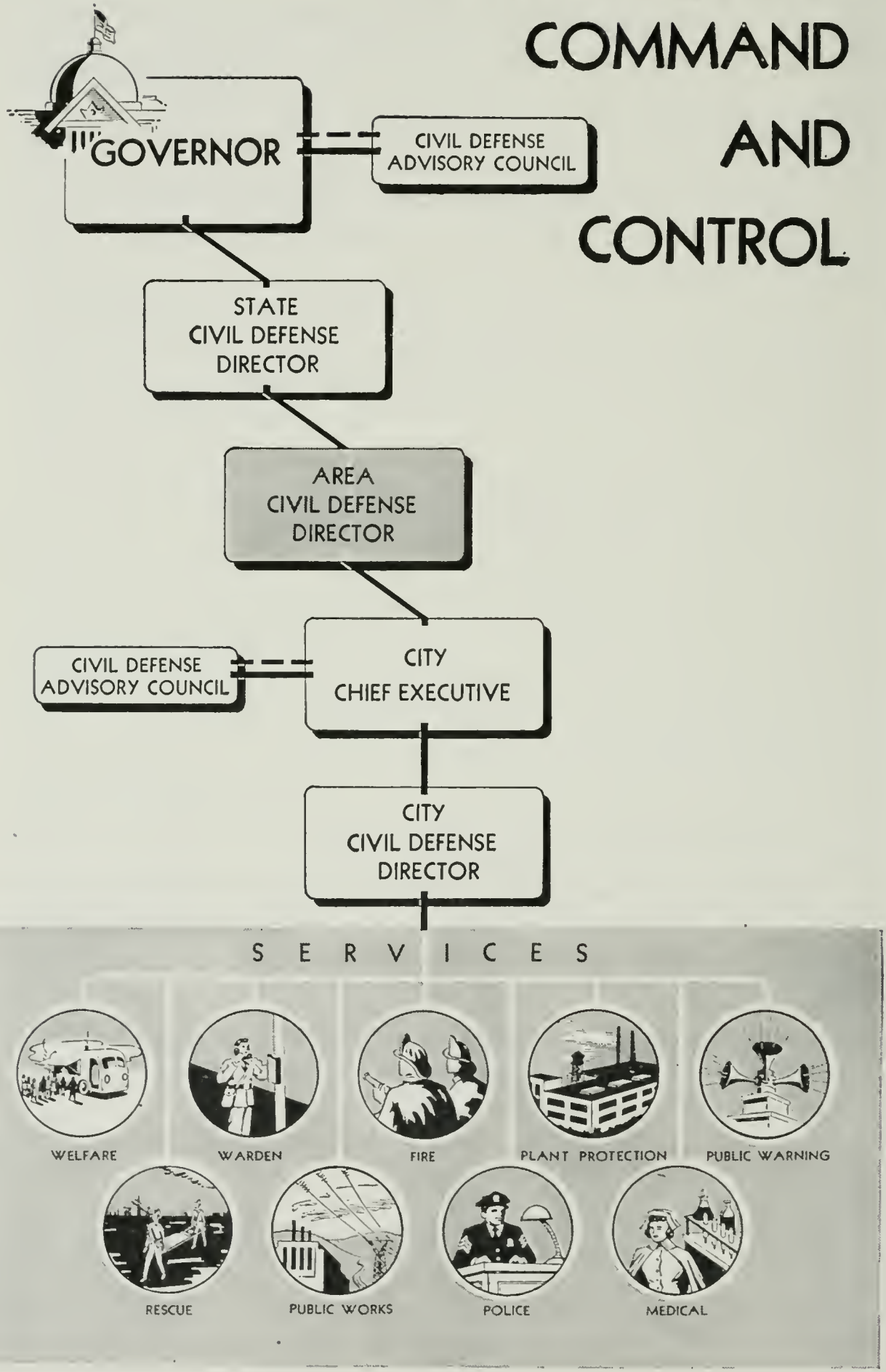
The services described in part II (except such static services as warden service) should be organized on a basis of specialized units, with provision for a high degree of mobility. To be effective, these specialized units must have (1) ability to assemble rapidly, (2) provision for rapid transportation, (3) provision for effective means of communication, and (4) provision for operational self-sufficiency.

In order to achieve a balanced organization of the various services, the State civil-defense agency must supervise the organization and development of all such units in support areas.

Mobility of unit organization in the support areas will give the communities in which they are formed an effective means of self-protection in the event of direct enemy attack, and at the same time will provide emergency protection on a State-wide basis.

All communities should anticipate the possibility of some form of attack, as well as the possibility of their being called upon to receive evacuees from other areas.

CIVIL DEFENSE COMMAND AND CONTROL



ORGANIZATION, COMMAND, AND CONTROL IN CIVIL DEFENSE

To be successful, a civil-defense operation must have clear-cut and well-established principles of organization and command.

STATE ORGANIZATION

The operating chain of command starts at the State level. The governor of each State has the responsibility for civil-defense operation in his State.

Where the authority and responsibility of the governor in civil-defense matters are not clearly established in law, legislation should be enacted to grant him the necessary powers. Suggestions for such legislation are presented in chapter 8.

During peace, the role of the State is primarily to advise, guide, and coordinate civil defense planning of local authorities throughout the State. Since mutual support between communities will be required in an emergency, peacetime planning should include provision for adequate direction of operations by State authorities during attack.

A State civil-defense organization should utilize existing State governmental agencies insofar as they relate to civil-defense operations, plus such additional new services as are discussed in part II.

A full-time State civil-defense director should be appointed on the governor's staff to head the State organization. Acting for the governor, he would have authority to direct State civil-defense operations. In addition, he would coordinate the civil-defense activities of his State with those of other States, and also with the appropriate representatives of the Federal civil-defense agency.

Because of the differences in organization among the States, the exact composition of a State civil-defense organization is a matter for State determination. A minimum uniformity of pattern must be achieved, however, in order to facilitate mutual assistance and interstate support. This pattern is suggested in the discussion of service functions in part II.

In order to provide flexibility and decentralization of command authority, the larger and more populous States should be divided into areas. These areas should be arranged around critical target cities, with their supporting communities.

Where desired, State area civil-defense offices and control centers may be provided, with full-time directors and staffs sufficient for 24-hour operation.

STATE CONTROL CENTERS

In event of a disaster the State civil-defense director would assume active command over civil-defense operations within his State. The State and area control centers would serve as the command posts from which orders would be issued to the civil-defense forces of the State.

To the State and State area control centers would go warnings of attack. From these centers the warnings would be extended to cities, towns and communities, and finally, through local public alarm systems, to the people.

By consolidating reports from the local community control centers, the State area control center would determine the extent and nature of the attack, then direct action. From the State control centers mobile support would be dispatched to aid the local organization in meeting the emergency.

LOCAL ORGANIZATION

Under the guidance of the State civil-defense director or his deputies each local community within the State should organize a local civil-defense organization. A full-time local civil-defense director should be appointed, under the direction of the mayor or other chief municipal executive.

As in the case of the State organization, the local organization should be built around existing municipal or county departments, adding only those new services which have no counterpart in existing government.

The local civil-defense director should be responsible for (1) establishing and administering the local civil-defense organization, (2) coordinating and directing the local civil-defense activities of public and private agencies or groups, (3) formulating and negotiating

mutual aid plans and agreements, (4) directing the development of civil-defense plans and programs in accordance with the policies and plans set by Federal and State agencies, and (5) establishing one primary, and one or more secondary control centers to serve as his command post during an emergency.

LOCAL CONTROL CENTERS

The local civil-defense control centers should function as the command posts of local civil defense, from which all the various services of local civil defense would be directed and controlled in the event of attack.

The local control centers would (1) receive and disseminate air raid warnings, (2) alert the various services to the impending attack, (3) marshal and disperse all civil-defense forces, (4) warn the public to take shelter, (5) quickly assess the nature and scope of the damage, and then (6) order into action the civil-defense services.

When local forces and mutual aid are inadequate to meet the disaster, the local control center would call upon the State civil-defense agency to dispatch into the disaster area additional mobile support units.

If the mutual aid and mobile support units within the State are not sufficient to meet the disaster, the State director would call upon the Federal civil-defense agency to arrange for additional mobile support into the State from other States, unless prearranged plans had been formulated by mutual-aid agreements between adjacent States. In the latter case action could be taken directly between the two States.

FEDERAL ORGANIZATION

Under legislation which is being submitted to the Congress, a Federal Civil Defense Administration would be established and charged with the following responsibilities:

1. Establishing and administering a national civil-defense program.
2. Estimating the total material, manpower, and fiscal requirements for carrying out the program; and thereupon distributing to the States such Federal aid in facilities, materials, and grants as may be authorized by the Congress.
3. Developing a program of research.

4. Developing and coordinating a program for educating and training the general public and volunteer workers.

5. Guiding the several States, Territories, and possessions in working out operating procedures and arrangements for mutual aid and mobile support. (Mutual aid is an agreement, usually limited in nature, between two communities to furnish each other certain kinds of aid. Mobile support is organized and ordered from above [State level] regardless of such agreements.)

6. Coordinating civil-defense operations in the event of a national emergency.

Regional offices would be established to serve as the link between the Federal civil-defense agency and the State.

Federal authority would be exercised to assure the economic and efficient utilization of any funds, materials, supplies, and equipment furnished by the Federal Government. The Federal Government would establish principles, standards, and guides in civil-defense planning and operations; establish and supervise air-raid-warning systems; establish and supervise command control communication networks; and establish Federal regulations as appropriate, pertaining to passive defense measures required as a military necessity, such regulations to be enforced by existing State and local authority.

With such exceptions, the organization and operation of civil defense should be the responsibility of the States and their political subdivisions.

In the appendix at the end of this volume will be found (exhibits A and B) suggested organization charts for the consideration of those States and municipalities which have not as yet finalized their civil-defense organizations. It is emphasized that these are suggestions only, and that variations in State and city structure may call for considerable adaptation of the ideas set forth in the charts.

In each chart provision has been made for a number of deputies or assistants to the director of civil defense. This suggestion has been made for two purposes: (1) To provide leadership for the various groupings of services that seem to belong logically together and (2) to provide alternative leadership for 24-hour duty at the control centers in emergencies, as well as a succession of command in event of the unavailability of the director or his immediate deputy.

THE ROLE OF THE MILITARY IN CIVIL DEFENSE

In wartime, the primary mission of the armed services is to prosecute the war against the enemy and to bring hostilities to a successful conclusion as soon as possible.

The central responsibility for planning national civil defense policy and programs was originally assigned to the military between 1945 and 1949. The assignment was given the War Department with the abolishment of the Federal Office of Civilian Defense in June 1945, and studies were initiated by the War Department Civil Defense Board. The report of this Board, representing the view of the armed services, recognized and emphasized the principle that civil defense was a responsibility of civil government—a responsibility that was inherent in the governments of the sovereign States and the political subdivisions of those States.

Upon the creation of the National Military Establishment (now the Department of Defense), an Office of Civil Defense Planning was established within the Office of the Secretary of Defense. This office continued and extended civil-defense planning and produced a report, Civil Defense for National Security, commonly known as the Hopley Report to which earlier reference has been made.

Responsibility for civil-defense planning was assigned to the National Security Resources Board in March 1949. The military, however, assumes certain general responsibilities in the active defense phase of the civil-defense program.

The role of the armed forces in the program comprises the following:

a. Guidance to the Federal civil-defense agency as to which areas are most likely to be attacked.

b. Furnishing as much information as possible to the Federal civil-defense agency as to anticipated forms of attack, plus technical advice as to defenses against such attack.

c. Decisions as to effective passive defense measures required as a military necessity and technical requirements for carrying them out (e. g., blackout, dimout, camouflage).

d. Warning of impending attack.

e. Assistance where possible in the event of war-caused disasters, and upon request by proper authority.

f. Disposal of unexploded ordnance (missiles or other delivered weapons with delayed action or faulty mechanism).

g. Technical assistance in training programs for key civil-defense personnel.

The Armed Forces also have responsibility in activities closely allied to civil defense, but not an integral part thereof. In the air defense of the United States, the Air Force will operate the Aircraft Observer System as a supplement to its radar screen. This activity is covered more fully in chapter 9.

LOCAL ASSISTANCE

The Armed Forces upon request may assist State and local civil authorities in planning and developing their civil-defense program in accordance with the Federal pattern. But the readiness of the Armed Forces to lend assistance to civil authorities in peacetime disaster cannot be counted on in wartime, because of the necessity to concentrate on their primary mission.

Military installations distributed throughout the United States often have common problems of defense and protection with adjacent communities under civil government. The military commanders of these installations are responsible for coordinating defense problems with the civil authorities of adjacent communities.

MARTIAL LAW

Application of martial law in areas commonly administered by civil authorities would be a last-resort measure in any civil-defense plan. Martial law is a means by which the President or a governor may protect the interests and maintain the safety of citizens under emergency conditions. In the case of civil defense, these emergency conditions could be brought about by a breakdown of existing local government, or by the military necessity of creating combat or defense zones.

Even under martial law the machinery and personnel of the existing civil government and civil-defense organization should be maintained and utilized to the fullest practicable extent. In event of its disruption through heavy casualties, or destruction, the early reestablishment of civil government and self-rule is a primary objective under martial law.

THE PUBLIC AFFAIRS PROGRAM

A MAJOR responsibility of civil defense at all levels is to meet the public demand for information which will provide the understanding on which an effective civil-defense program depends.

To this end, each organization should undertake a public affairs program, designed to keep the people continuously informed about civil defense.

The functions, responsibilities, and activities of the public affairs program are essentially the same at all levels, municipal, State, and Federal. At each level they should be organized under a public affairs head who would advise the Director and administer the operating phases of the program.

In order to establish immediate public understanding, three major activities should be launched promptly as an integrated program:

(1) *General Public Education*

Public understanding and participation in the civil defense program must be based on knowledge of the facts, and of the importance of civil defense in modern warfare, in order to insure—

(*a*) Minimum loss of life.
(*b*) Minimum fear and panic.
(*c*) High public morale.
(*d*) Full individual participation in civil-defense activities.
(*e*) Maximum public support of the war effort.

Consistent with security, the people must be told the truth about the dangers from atomic, biological, chemical, and other types of warfare which might be used. Further, the people must be told frankly how effective a civil-defense program will or will not be against these weapons.

It is the responsibility of the Federal civil defense agency to review and release all basic information on civil-defense matters in a form

suitable for thorough public understanding. In carrying out this responsibility the Federal civil defense agency plans to issue a series of simplified booklets dealing with personal survival problems in a modern war. Any release of material by State and local authorities should be consistent with this basic information supplied by the Federal Government. Material on these subjects is released only after thorough checking for accuracy by informed technical experts.

Mere distribution of printed material, motion pictures, or radio programs does not guarantee full public understanding of these matters. State and local civil defense officials should develop, as soon as possible, an intensive public education program for their own areas.

(2) *Public Information Program*

The public information program should provide regular reports to the public on all civil-defense activities, through such means as newspapers, radio and television programs, booklets, pictures, press conferences and interviews, and public appearances of responsible officials.

(3) *Public Relations Program*

Knowledge on the part of the public is vitally important to the civil-defense program. Sound public relations should be a consideration in every phase of the program.

The purpose of public or group relations in the public affairs program is to develop cooperation between the civil-defense organization and such organized community groups as:

(a) Civic and fraternal groups.
(b) Business and industrial associations.
(c) Organized labor groups.
(d) Veterans organizations.
(e) Women's groups.
(f) Religious groups.
(g) Educational groups.
(h) Professional organizations.
(i) Farm and trade groups.
(j) Various special groups, such as the Boy Scouts, Girl Scouts, 4-H Clubs and the like.

Since a large number of these organizations are Nation-wide in scope,

with national, State, and local headquarters, the public-relations program must be developed cooperatively at all three levels of government—Federal, State, and local.

ORGANIZATION

Because the public affairs program affects all phases of civil defense, a public affairs advisor should serve on the staff of the civil defense director at each level of government. He should advise on matters affecting public opinion and be consulted on all policy decisions.

The second function of the public affairs advisor is to administer the operational phases of the public education, information, and relations programs.

Full service in the public affairs field should be established as quickly as possible, in order to maintain high morale and effective public participation in civil defense.

TRAINING

CIVIL defense training teaches people how to perform the services needed before, during, and after an enemy attack.

RESPONSIBILITIES FOR CIVIL DEFENSE TRAINING

The training program covers the training of civil defense workers at the Federal, State, and local government levels; also the training of individuals under the self-help principle of civil defense.

The Federal Government is responsible for formulating a Nation-wide civil defense training program, and for developing training policies and plans as guides to State and local authorities. The Federal civil-defense agency provides staff guidance and assistance to these authorities.

National civil-defense schools should be operated so that State and local officials and instructors may receive advanced instruction. These will consist of a national staff college for key administrative personnel at regional and State levels, and an appropriate number of technical schools for selected personnel who will operate State and municipal training programs.

The State governments should organize and operate appropriate State training programs, and should assist local authorities in establishing and supervising their training programs.

The local government has the responsibility for training most of the civil defense personnel and the general public.

All persons have an individual responsibility for training themselves and their families in basic self-help. In this respect, the self-help principle contemplates instruction in household precautions and first aid.

TYPES AND CONTENT OF TRAINING

The types of training courses vary at different levels of government, but the basic techniques and doctrine should be uniform. The Federal Government will provide standard courses of instruction for those who will train civil-defense instructors and workers.

Schools should be established for training selected key personnel in basic civil-defense organization and operations, in methods of instruction, and in certain specialized areas of civil defense. These trained persons then return to their organizations to extend the standardized training.

Mobile support systems necessitate joint operation of civil-defense personnel between communities. In addition there will be shifts of population during a national emergency. For these reasons, Federal, State, and local schools should teach the same basic course content.

The bulk of civil-defense training will be conducted at the local level. There the civil-defense worker receives basic training in first aid, rescue work, and the other specialized activities that make up his civil defense job. He will also be trained in combined exercises involving other civil defense organizations.

Planning must provide for review, to assure that earlier training has not been forgotten. Supplementary training is necessary for the dissemination of new information and improved techniques.

TRAINING STAGES

Training should be carried out in four progressive stages: First, individual training; second, team or unit training; third, collective training; and fourth, combined training.

During the first stage, all volunteers should receive basic civil-defense training in order to provide a general background of civil-defense information and a certain amount of essential technical knowledge. In addition, certain volunteers should receive specialized training to qualify them for specific civil-defense duties.

During the second stage, units will be formed for team training in technical and service duties. The functions of the team will be taught and demonstrated, and there should be a liberal interchange of individual duties within the teams.

The third stage, collective training, provides for training of teams or units on a wider basis. It entails training in the functions and activities of the other civil-defense services. Collective training should be made as realistic as possible and should reproduce conditions likely to arise before, during, and after an emergency.

The fourth stage calls initially for combined indoor and outdoor training of all local civil-defense services, including those in public and private organizations. This combined training should progress to include larger and larger geographical areas. The emphasis in these exercises should be on the effectiveness of mutual aid and mobile support arrangements.

CIVIL DEFENSE FINANCE

THE financial burden of civil defense should be borne by government at all levels (Federal, State, and local), and there will doubtless be contributions from private sources. Certain principles are presented now as a guide for determining which levels of government should be responsible for the various types of expenditures.

The Federal Government must bear a substantial part of the cost. The burden cannot be placed wholly on State and local governments, even though the responsibility for organizing and operating the program rests primarily at those levels.

Considerations which call for Federal expenditure are as follows:

1. The civil-defense program should be a national program, not a composite of independent State and local programs. Sufficient uniformity should be established in civil-defense equipment and practices to permit the mobilization of civil-defense forces for use anywhere in the country.

2. Without Federal expenditure, the costs of civil-defense preparation and operation would fall disproportionately on communities which are critical target areas because of their importance to war production and transportation, or because they represent concentration of the Nation's manpower resources. Since these critical target areas represent the heart of the Nation's defense resources, the entire country is concerned with their protection and should share the cost.

3. In the interests of national security, the Nation cannot permit any community in a critical target area to fall below minimum standards of civil defense. In the absence of Federal aid, achievement of these minimum standards would depend on the ability and willingness of State and local legislative bodies to provide all necessary funds. Lack of the necessary funds might result in one or more of such areas failing to have the civil defense necessary to protect targets vital to national defense.

State and local governments, however, should recognize that they will also have heavy expenditures in order to establish and operate civil-defense organizations and training programs. In the interest

of equalization of the financial burden between critical target areas and those less critical, State governments should assume an equitable share of the costs of county and municipal civil defense.

Insofar as Federal expenditures are concerned, the Congress must make the final determination each year as to the level of civil defense preparedness to be achieved throughout the country, and what share of the over-all cost will be borne by the Federal Government.

DEVELOPMENT OF REQUIREMENTS

In order that determinations of requirements may be made intelligently, the Federal Government is planning to publish:

1. Standards governing quantity of supplies and equipment needed beyond normal peacetime requirements, based on total population, population density, relative vulnerability of areas, and availability of mobile support.

2. Specifications and performance standards for supplies and equipment.

3. Standards governing manpower needs for civil defense, including personnel allocated to mobile support units; also such additional full-time, part-time, or volunteer personnel as may be needed beyond normal peacetime requirements.

Based upon the above, each State should develop its civil-defense requirements. From these should be deducted the public and private facilities, equipment, supplies, and manpower resources available within the State.

The State governments should screen the requirements estimates of municipalities, to eliminate requirements which could be met by mutual aid agreements among communities or by the organization of mobile support forces by the State itself.

Requirements based on any concept that each locality must be self-sufficient in an emergency would be unrealistic in cost.

The estimates of total civil-defense requirements should be kept up to date. As Federal standards are refined, these should be applied by each State to its estimates. The experience of State and local civil-defense authorities in developing and testing their plans will yield additional information to be applied to the over-all requirements estimate.

ALLOCATION OF FINANCIAL RESPONSIBILITY

There follows a more specific breakdown of proposed cost allocation among the three levels of government.

Federal:

1. Establishment of the Federal civil-defense agency, regional offices, and national training centers.

2. Supervision of a Federal education and information program for State and municipal authorities and the general public.

3. Supervision of Federal training programs including the furnishing of instructors and of manuals, texts, and special equipment where needed.

4. Purchase, storage, and distribution of some of the essential equipment and supplies needed for civil defense; provision for essential equipment and supplies to replace that destroyed or used up in an emergency.

5. Research in protective construction and personnel shelters, and development for standards for critical target areas; support to States for a portion of the costs of specific protective construction, personnel shelters, and control centers in critical target areas.

6. Support for essential control communication and alert systems and public air-raid warning systems.

State:

1. Establishment of State office and area offices, including full-time State and State-area directors and staffs.

2. Furnishing of facilities, schools, classrooms, etc., for training and educational purposes.

3. Provision for facilities, supplies, materials, and equipment for civil defense not provided by the Federal Government.

4. Mobilization of State volunteer workers and provision for instructors to train volunteers.

5. Contribution to localities to supplement the Federal share of the cost of specific protective construction and personnel shelters.

Local:

1. Expense of local civil-defense director and staff, and support of auxiliary personnel when and where needed.

2. Use of public facilities such as school buildings, hospitals, welfare and other public-service installations, including those needed for the training of local instructors.

3. Provision of instructor personnel to augment and extend the training provided by the Federal and State civil-defense organization.

4. Provision of supplies, materials, and equipment beyond that provided by Federal and State governments.

5. Mobilization and training of volunteer workers.

6. Cost of specific protective construction and personnel shelters over and above Federal and State contributions.

CIVIL DEFENSE LEGISLATION

To achieve effective civil defense will require adoption of legislation at each level of government. A Federal law should be passed establishing an operating agency, defining its powers and functions, and providing for appropriate personnel for its operation. In general, this legislation should cover:

1. Establishment of the Civil Defense Administration and appointment of an Administrator and a Deputy Administrator.
2. Directions to the Administrator as to his duties, including:

(*a*) Sponsorship and direction of national civil-defense plans.

(*b*) Coordination of Federal civil-defense planning between departments of the Government and between the Federal Government and the States.

(*c*) Research and development on special civil-defense measures.

(*d*) Dissemination of appropriate information and educational programs.

(*e*) Direction of relief activities of United States agencies in emergencies or disasters.

(*f*) Procurement, transport, and storage of essential supplies and equipment.

(*g*) Financial assistance as provided by the Congress.

Under this legislation, the Administrator would establish regional offices and appoint regional directors, and provide leadership in all fields of civil-defense activity.

A copy of the proposed Federal law will be found in the appendix, marked exhibit C.

STATE LEGISLATION

The primary objectives of legislation at the State level are to create a State civil-defense agency, authorize establishment of similar agencies in the political subdivisions of the State, and give the governor emergency powers to deal with enemy-caused disasters and sabotage.

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Such powers will also assist in dealing with natural disasters such as floods, fires, storms, earthquakes, and explosions.

In general, State legislation should provide for the following:

1. Establishment of a State civil-defense agency in the executive branch of the State government to serve as an advisory agency to the governor, in his capacity as chief executive. Action when necessary would be carried out through the office of the governor, and he would serve as ex officio head of the civil-defense agency.

2. Appointment by the governor of a full-time director who would serve as the operating head of the civil-defense agency in executing the governor's civil-defense responsibilities. The director should coordinate the activities of the State agency with local civil-defense agencies.

3. Authority to create State area offices and local organizations for civil defense in the political subdivisions of the State.

4. Authority to enter into mutual-aid arrangements with other States, to coordinate mutual-aid plans between political subdivisions of the State, and to establish mobile support units to reinforce stricken areas both within and outside of the State.

5. Authority to use the property, services, and resources of the State for civil-defense purposes, and the power to take property under certain circumstances when proper compensation is paid. (This power should be authorized for use only in case of attack or after a declaration of an emergency by the President or by the governor.)

6. Authority to make surveys regarding food, clothing, or other necessities of life, and to distribute these necessities.

7. Authority to take precautionary measures against air raids and other forms of attack, and authority to mobilize and appoint auxiliary personnel.

8. Authority to regulate highway and other intrastate traffic in the interest of national defense.

9. Authority to designate emergency health and sanitation areas in a section of the State which has been damaged by air raids, or has suffered other catastrophe, and authority to make rules and regulalations designed to safeguard public health.

10. Authority to direct all activities of State, district, and local officials and municipal and volunteer agencies with regard to evacuation of civilians within the State or into adjoining States.

11. Authority to enforce all laws and regulations relating to civil defense, including Federal regulations, and in emergency to assume direct operational control of all civil-defense forces.

12. Additional extraordinary emergency powers which may be exercised by the governor in case of war, or upon the declaration of an extreme emergency.

STATE DIRECTOR OF CIVIL DEFENSE AND ADVISORY COUNCIL

The director, under this enabling legislation, would be responsible to the governor. He would coordinate the work of the State defense agency with that of the local councils, and with the Federal civil-defense agency.

It is suggested that legislation provide for a Civil Defense Advisory Council with membership representing the more important functions or skills required in civil-defense planning. It is advisable that the directors and heads of State departments having knowledge of those particular functions either be members of the council or be called in for advice.

In some States it will be desirable to provide for subdivision into areas for administrative and operational decentralization. This is particularly desirable in those States in which there are multiple critical target areas.

LOCAL LEGISLATION

Because of the variety of types of local government that will need to adopt local legislation for civil defense, and because of the variations among the laws defining the powers of local government, a comprehensive model local ordinance has not been prepared.

Local civil-defense legislation should follow carefully the enabling legislation enacted by the States, and much of the language in the State law might be adopted in the ordinance. Each of the powers conferred by State enabling legislation should be translated by local ordinance to the extent the laws of the State require.

Provision should be made for appropriations, including those for the employment, where necessary, of additional personnel for the civil-

defense staff. However, existing governmental facilities and services should be used to the greatest possible extent.

The ordinance also may provide for a civil-defense advisory council which should include key civic leaders and municipal authorities.

Local ordinances should provide for the recruiting of volunteer workers and define their status, and should authorize training programs, procurement, storage and distribution of supplies and equipment, establishment of communications and other facilities, and execution of mutual aid agreements.

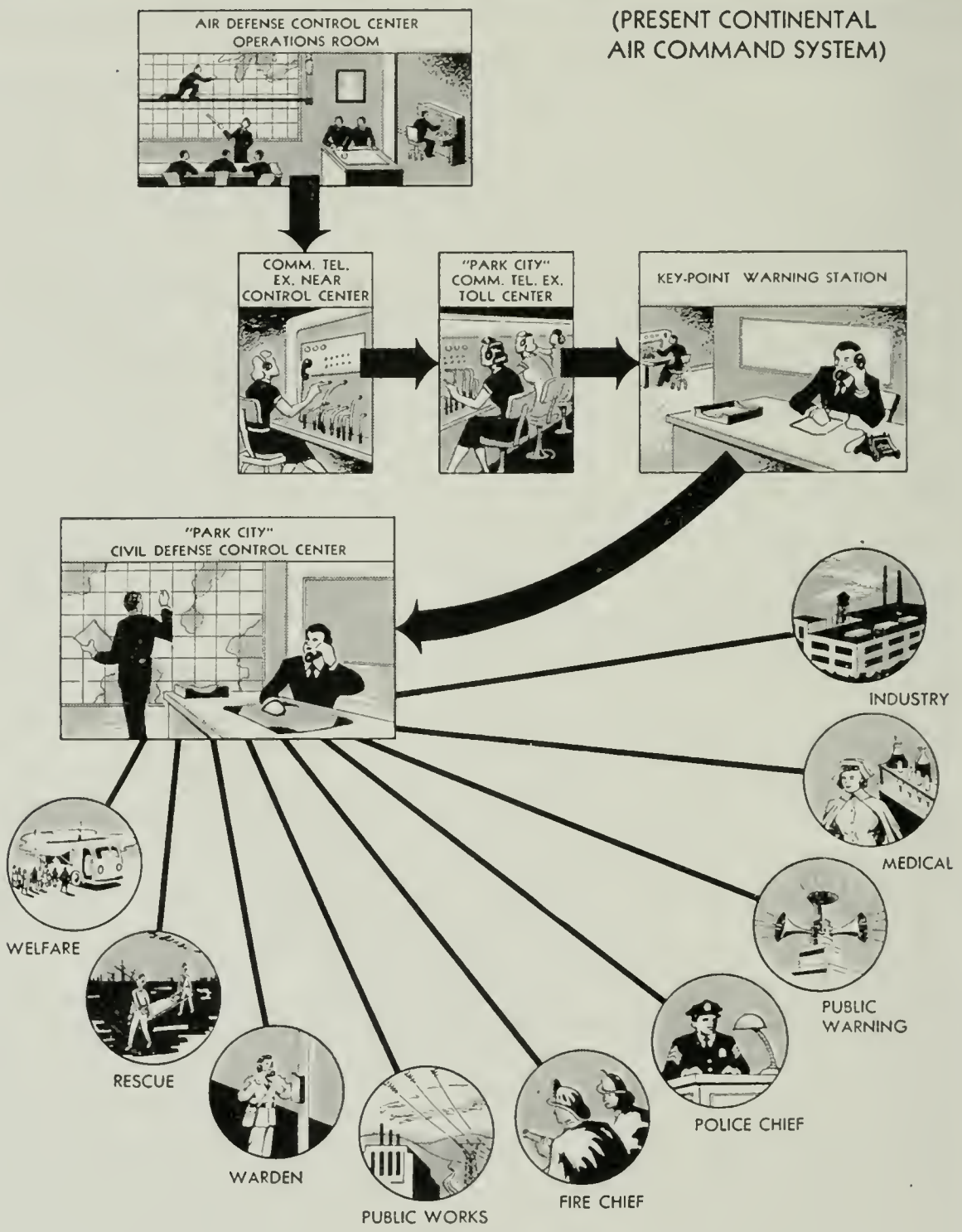
REVIEW OF EXISTING STATE LEGISLATION

In order to meet the requirements of the Federal civil-defense program, a review and study of existing State civil-defense statutes and the preparation of far more complete State and local legislation should be instituted now. In many States existing legislation was enacted as State disaster control legislation or as statutes to create a planning agency to develop defense plans. Operation of a civil-defense organization was not considered. These deficiencies require correction. An improved Model State Civil Defense Act to establish an agency with much broader scope and extending to the governor extraordinary authority in time of war or great emergency is included in the appendix, marked exhibit D. This proposed legislation is suggested for enactment in every State, modified as may be necessary in the light of existing statutes and constitutional requirements.

Part II

AIRCRAFT WARNING SYSTEM

(PRESENT CONTINENTAL AIR COMMAND SYSTEM)



AIR RAID WARNING SERVICE

THE air-raid-warning service is established to disseminate air-raid warning information to appropriate civil-defense authorities or to the general public. Air-raid warnings are based on information coordinated by military agencies as to approaching hostile aircraft. This data is then made available to Federal civil-defense air-raid warning personnel at designated military control centers.

Air-raid warnings initiated at these military control centers are transmitted by the fastest available means to selected key receiving points in the threatened areas, where they are received by civil-defense authorities. They will be responsible for extending the warning to cities, towns, and communities from which the warning will pass through the local public alarm system to the individual citizen.

PROVISIONAL WARNING SYSTEM

Pending assumption of responsibility by civil-defense authorities, a provisional warning system has been established and is being operated by the United States Air Force. It includes personnel and terminal telephone equipment with which to initiate warnings at the military control centers, and it provides special telephone equipment installed in strategic locations, where civil-defense authorities can receive warnings for further dissemination throughout the State, or to subdivisions of the State which are designated as warning areas.

The toll services of commercial telephone companies have been integrated into the system to provide the link between the air-raid-warning officers at the military control centers and the special air-raid-warning telephones throughout the country. Special procedures have been adopted by the telephone companies to assure prompt transmission of warnings.

Individual States must establish procedures for dissemination of warning from key receiving points to threatened areas within their boundaries.

The methods for transmitting warnings from key receiving points to civil-defense personnel and the public throughout the areas to be alerted should be determined locally. In critical target areas, public signals for disseminating warnings should be standardized insofar as possible on a basis to be issued by the Federal civil-defense agency.

PERMANENT WARNING SYSTEM

The permanent civil air-raid-warning system will be installed, manned, operated, and maintained as a civil-defense function. Personnel responsible for initiating air-raid warnings at the military control centers will be provided by the Federal civil-defense agency as will be the transmitting and receiving equipment for passing these warnings to the State and local civil-defense organizations.

The procedure for disseminating warnings, interpretation of signals received from the military control centers and their application to civil-defense rules and regulations, will be standardized and issued by the Federal civil-defense agency.

SHELTER PROTECTION

TO PROVIDE shelter protection for all of the people in all places is financially impossible. The program should, instead, be designed to provide shelters in the spots where they are most needed—that is, in the critical target areas which have been determined to be the most likely objectives of enemy attack. In these areas, the shelter program should be economically planned, and every effort made to use existing structures wherever they can be made to serve.

A shelter construction program will be, at best, a defensive measure designed to protect against weapons of uncertain character from an unknown source at an unknown time.

No shelter is of value unless an adequate warning service exists, and unless the population is prepared to use the shelter after warning. The air raid warning service now in being will be continually improved with the objective of alerting both the civil-defense organization and the general public. Rehearsals should be held to insure that persons, after being alerted, promptly take cover.

Responsibility for the shelter construction program must be shared by Federal, State, and local authorities. Local administrations will be asked to survey the needs of their areas and execute any planned construction program. As indicated in chapter 18, the engineering services in the various communities will assist in this work. The Federal Government will be responsible for research and education. In addition it will assume a portion of the construction cost of approved community and heavy type shelters.

For planning purposes, three types of atomic explosions are being considered: (1) A high air burst, (2) an underwater shallow burst or ground burst, and (3) a deep water burst.

The high air burst is the most damaging of the three. In an underwater shallow burst or ground burst, blast, heat, and residual radioactive contamination would be a problem over a distance of several thousand feet from the blast site. In a deep water burst, blast and

heat effects would be largely eliminated as a risk, and residual radioactive contamination would constitute the principal hazard.

Shelters should be of three types, depending upon the need:

(*a*) Maximum strength for key installations.

(*b*) Moderate strength for population masses in urban centers, factories of strategic importance, and for suburban community protection.

(*c*) Improvised for small group and family protection in residential areas.

Before constructing any new shelters, existing structures such as deep subways, bank vaults, and basements and subbasements of major buildings of reinforced concrete construction should be surveyed. Adaptation of useful civic structures such as underground garages, subways and basements of well-constructed buildings for shelter purposes is desirable.

Shelters of "a" type will be built in limited numbers to give protection to key personnel and facilities important to the safety of the community in an emergency.

Type "b" shelters include shallower subways, underground garages, one or two story monolithic concrete structures, reinforced basements of masonry buildings, and new reinforced concrete shelters.

Type "c" shelters will include reinforced portions of basements, or shored-up dugouts, earth covered sections of culvert material and similar improvisations. Detailed plans for practical and inexpensive individual family shelters and for more elaborate communal type shelters are also being prepared. Many families can work out their own shelter needs with noncritical materials available locally. An effective shelter should be covered with at least 3 feet of earth. Shoring of the earth can be accomplished with heavy timber, old railroad ties or similar materials. Any type of basement shelter should have two readily available exits.

There is a need for review of current building codes to insure adequate strength in at least one portion of the basement to provide shelter for the population of the building.

In the development of the shelter program, it will be the responsibility of the Federal Government to initiate research projects and develop structural standards for use by local communities. From studies of all types of shelters now being made, necessary design criteria will be developed and made available to interested individuals and agencies in a personnel shelter manual.

EVACUATION

EVACUATION in civil defense means the organized removal of civilians from any given area. The area may be an industrial plant, a city residential block, or an entire city.

As one means of mass safety, evacuation may be effected either before or after attack, depending upon the accuracy and timing of advance warning.

Because of its disruptive effect upon organized communities and upon the morale of the people, evacuation before attack should be considered only after all other means of insuring mass safety have been evaluated. The Federal civil-defense agency is not planning for widespread use of this method. All plans at State and local level, however, should be made with an eye to the possible use of this method, should circumstances warrant.

Evacuation may be of two types:

(*a*) Organized, voluntary evacuation wherein people leave an area under supervision of constituted authority. This usually involves the removal of priority groups.

(*b*) Organized compulsory evacuation, which is the mandatory removal from an area of a portion, or all, of the civilian population.

The nonorganized voluntary exodus of civilians seeking accommodations elsewhere in anticipation of enemy attack is not regarded as evacuation. Such movement, however, has an important bearing on organized evacuation, since it determines the number of persons remaining within an area which may later be subject to evacuation.

PLANNING FOR EVACUATION

The responsibility for planning and carrying out evacuation rests with the State civil-defense organization. An earlier chapter describes the method by which the Federal Government has evaluated the "critical target areas" of the country, and is informing each State of the location of such areas. On the basis of this information, each State should develop a plan for evacuation of population from the critical areas to the reception areas in the remainder of the State.

This will include a survey of reception areas, especially their capacity for housing and other facilities.

In the event a State's reception areas prove inadequate, or if changing circumstances require planning for evacuation of a reception area, interstate evacuation may be necessary. However, interstate evacuation will be carried out on the basis of State plans, in cooperation with the Federal regional civil-defense agency. These plans can be adapted to interstate operations when necessary.

Planning for evacuation involves the following steps:

1. Selection, assignment, and training of persons to organize the planning.

2. Registration and classification of evacuees by priority groups, together with establishment of standard procedures for keeping changes of address and other vital information up to date.

3. Designating reception areas and surveying their capacities.

4. Estimating the number of evacuees from critical areas.

5. Correlation of reception area capacity with numbers to be evacuated, and determination of numbers and groups to be assigned to individual reception areas. This work should take into account such factors as distance, availability of transportation, and possible barriers resulting from disaster.

6. Selection and designation of gathering points (where persons gather for transportation to assembly areas) and assembly areas (where persons assemble for transportation to reception destinations) from which transportation to reception centers can be rapidly routed, loaded, and dispatched.

7. Coordination with military authorities on use of routes.

8. Coordination of the evacuation plan with other phases of State and local civil defense plans, particularly transportation planning, provision for mass care of evacuees during the period required for loading the vehicles and during the journey, and provision for welfare services in the reception areas. Welfare services for evacuees are more fully discussed in chapter 17.

EVACUATION OPERATIONS

Evacuation decisions will be made by civil authorities, except in places where the United States has become a combat zone, in which case such decisions will be made by the military.

As a step prior to ordering evacuation, civil authorities may choose to encourage the voluntary departure of those nonessential civilians who can establish homes with relatives or friends, or otherwise make their own arrangements.

Once evacuation is ordered, persons should be assembled by blocks or sectors, under supervision of the warden service, then moved by categories in approximately the following order: (1) school-age children (6 to 15 years, inclusive) with suitable escorts; (2) children under 6 years of age, accompanied by mothers, guardians, or other escorts; (3) pregnant women; (4) the aged, infirm, and other incapacitated persons; (5) inmates of institutions; and (6) all others, except those serving in essential capacities such as industry.

Evacuation of the hospitalized, the sick, and the injured will be conducted under the direction of a health and medical service representative who will be responsible for seeing that the evacuation is carried out in accordance with the plan.

ORGANIZATION FOR EVACUATION

The local civil-defense director should appoint a chief of evacuation service who will be responsible for developing the local features of the State plan, and for creating an organization to carry out the plan.

A local evacuation board should be established. This board should consist of the chiefs of evacuation, police, transportation, welfare, medical and health, and warden services of the civil-defense organization, plus those other officials considered necessary to coordinate evacuation plans with other related plans.

The local evacuation chief should be directly responsible for issuing, through the civil-defense director, the regulations and instructions governing all evacuation and reception procedures, for the selection, training and supervision of the personnel assigned to evacuation or reception duties, and for transmitting official instructions about evacuation and reception to the civilian population itself.

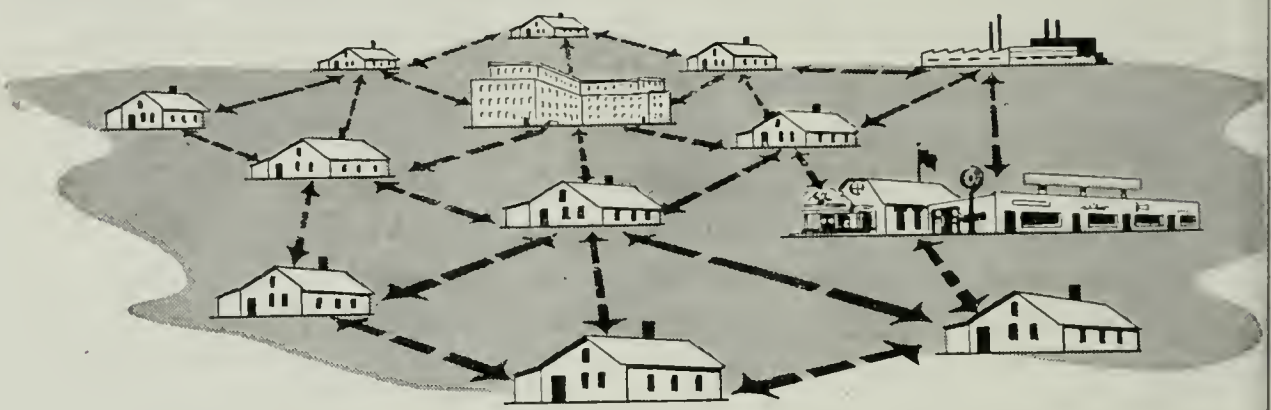
In dealing with individual evacuees, the evacuation organization should operate through the warden service.

The State director of civil defense should appoint a chief of evacuation to his staff to develop effective evacuation and reception plans on the State level and coordinate all local evacuation and reception plans within the State.

● INDIVIDUAL SELF-PROTECTION

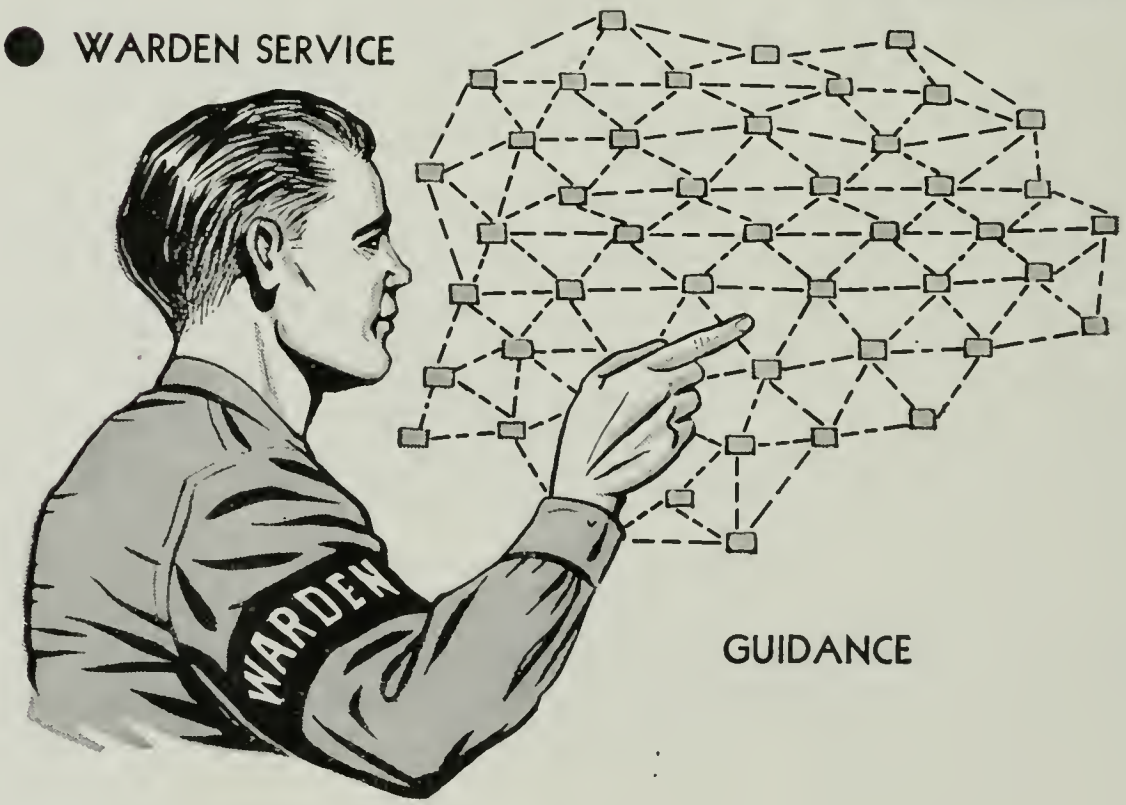
LEARNING
& TOOLS

● EXTENDED SELF-PROTECTION



COOPERATION

● WARDEN SERVICE



GUIDANCE

WARDEN SERVICE—ORGANIZED SELF-PROTECTION

LOCAL GOVERNMENT, in mobilizing and organizing its resources and facilities for civil defense, should assign to its citizens the maximum responsibility for self-protection.

INDIVIDUAL SELF-PROTECTION

The family unit constitutes the basis for individual self-protection. The individual and the family should be locally educated about measures they may take individually for self-protection, through programs described more fully in other chapters. Specifically, the individual should be encouraged to:

(*a*) Take training and refresher courses in self-protection, such as first aid training, fire prevention and fire-guard service, emergency health and sanitation, and many related subjects sponsored by the local Red Cross or other agencies in the community.

(*b*) Equip himself with necessary tools, supplies, and other essentials for the preservation of himself and his family.

EXTENDED SELF-PROTECTION

As distinct from individual self-protection, all communities in critical target areas should build a thorough and extensive organization for common protection and orderly action in event of a disaster. Extended self-protection should be organized:

(*a*) Where people live (in blocks or multiple blocks, or separately in large apartment buildings).

(*b*) Where people work (in blocks of small commercial buildings, or separately in large office buildings, factories, or department stores).

(*c*) Where people may be confined, as in hospitals, prisons, or other institutions.

(*d*) Where people assemble in large numbers for worship, entertainment, recreation, or education.

The people in each of these areas should be organized into teams of specialists for fire-fighting, rescue, first aid, and all other essential elements of concerted self-protection that will afford immediate protection without primary reliance upon the professional or civil defense protective services. This type of organized self-protection should be operated under the responsibility of the warden service and is called extended self-protection.

In the areas outside of the designated critical areas, a similar but modified extended self-protection organization should be organized by the warden service to:

(*a*) Afford protection in event of an unanticipated attack.

(*b*) Promote means for organizing reception of evacuees and other supporting programs.

WARDEN SERVICE

Organized self-protection is accomplished through a warden service organized under local civil defense authorities.

The warden service furnishes the administration and leadership for organized self-protection (individual and extended self-protection) and is a bond between the people of the community and their civil defense organization. Wardens are volunteers who should be well known, honored and respected in their neighborhood or place of work, persons whose leadership is acceptable. They act as the pipeline of civil defense information both to and from their areas. They are responsible for organizing and training the individuals in their area for individual self-protection and for collective extended self-protection.

Being purely local as far as operations are concerned, the warden service has no direct counterpart in the State civil-defense organization. However, the State civil defense director should assign a member of his staff to assist localities in organization of the warden services.

A chief warden should head the warden service in each municipality or other local government subdivision. Units of the warden service should be determined by each city and may vary considerably in size in different geographic areas. Generally speaking, a block or large building containing approximately 500 people is a desirable operating unit. In order to have orderly reporting and systematic

functioning, a district or larger area warden organization composed of many operating units seems necessary. In very large cities it may be necessary to create zones of organized extended self-protection and establish a supervising warden organization which will group the districts together for administrative and operational purposes.

The warden service should be assigned the following specific functions in the local civil defense organization:

1. Organize and operate individual self-protection training and refresher courses, including cooperation with local Red Cross and other agencies in the community.

2. Organize, train, and operate the organized extended self-protection program.

3. Instruct the public on civil-defense regulations; disseminate current information to the people in every neighborhood regarding civil-defense developments.

4. Assemble data and record essential area information on occupants of buildings, businesses, facilities, physical features, and equipment.

5. After an enemy attack, mobilize and operate organized extended self-protection forces in their area; make reports of casualties and damages; and call for all needed assistance from the emergency services when the situation is beyond the control of the organized extended self-protection forces.

6. Assist in the unexploded bomb reconnaissance program.

7. Assist mobile support teams at the scene of the disaster. Wardens with their intimate knowledge of their areas can collaborate with officials responsible for evacuation, police and fire, communications and transportation, medical and health welfare, engineering and rescue, atomic, biological and chemical defense, information and education, and vital statistics.

Any information received by wardens concerning such internal security matters as espionage, sabotage, and subversiveness should be promptly transmitted to the nearest representative of the FBI without any screening, appraising, or filtering of the information received.

Wardens should receive comprehensive training in fire fighting, first aid, evacuation, unexploded bomb reconnaissance, and other courses that will enable them to perform more effectively their official duties. Fire guard functions are particularly important in relieving

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regular fire-fighting units from the necessity of coping with small fires. See chapter 14 for further detail.

Women, and particularly housewives, should play an important role in the warden service. Experience has proved that women are particularly qualified for this type of responsibility and are generally present in residential neighborhoods at all hours.

MUTUAL AID AND MOBILE SUPPORT SYSTEM

A MAJOR enemy attack on any one of this country's metropolitan centers could place a civil-defense burden on that community far beyond the capacity of the community's own organized protective services. In order to preserve lives and property, the stricken city would need the immediate assistance of organized forces from outside its own boundaries. Civil-defense planning, therefore, calls for a complete and effective system of mutual aid among communities. Mutual-aid plans will be strengthened and extended through mobile support plans under State control.

The plans rest on the premises that—

(*a*) most communities can give assistance to others without unreasonably depleting their own civil defense and other protective measures.

(*b*) no community could afford the establishment of complete self-sufficiency (nor would it be practical, since surplus resources unnecessary in peacetime would be vulnerable to destruction in event of attack).

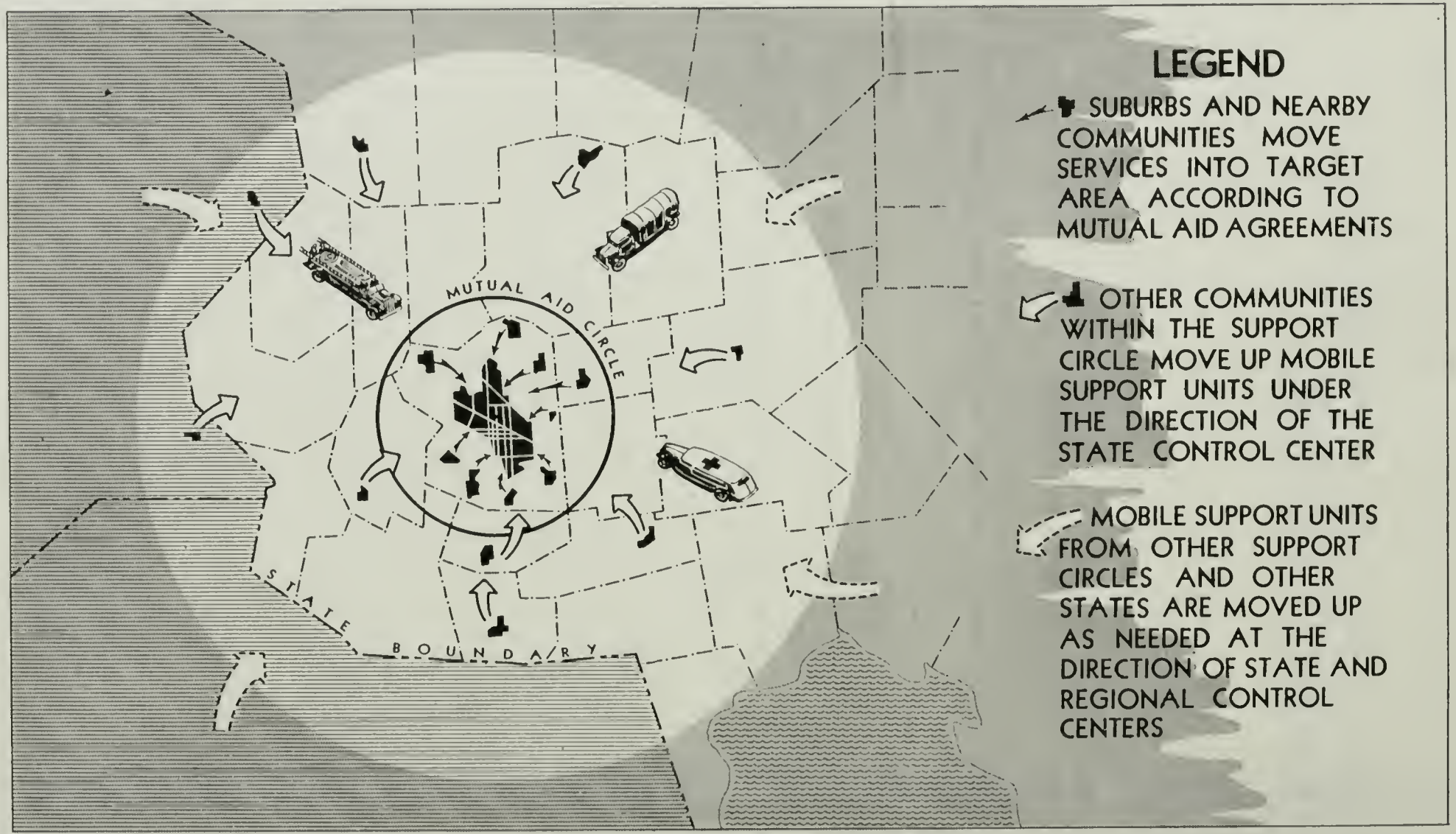
(*c*) as a National program the sound approach is to utilize existing State-wide resources letting the Federal Government stand prepared to replace destroyed equipment rather than furnish excess equipment in advance.

Mutual aid is defined as those voluntary arrangements by which the protective services of organized communities assist each other in time of need, usually on the basis of prior planning and voluntary contractual agreements between communities. Mobile support is aid directed by State authority into a stricken area regardless of such agreements.

MUTUAL AID

Mutual aid is not a new concept. It exists today between many American communities for a variety of purposes. The first step is to formalize existing agreements, so there will be full understanding of

MUTUAL AID AND MOBILE SUPPORT PATTERN



the duties and responsibilities of all concerned. The second step is to extend existing agreements or negotiate new ones to cover all of the services of civil defense.

Circumstances of civil defense may call for a new system of agreements to supplement those which now exist, since many agreements now in force are limited by being confined to adjacent communities within metropolitan centers, or built-up urban areas. An enemy attack could affect simultaneously all parties to local mutual-aid agreements, and thus limit the amount of aid which any of the participating communities could actually give to a neighboring city in time of need.

Once mutual aid plans are adopted, they should be tested in practice in order to assure that all participants understand exactly what must be done. Procedures for putting the plan into effect should be carefully defined by the State civil defense authority in the area, with clear understanding as to who makes the decisions and under what circumstances. Advance planning should be thorough to the point where, in an emergency, the mutual-aid forces can be assembled and dispatched with precision and speed.

MOBILE SUPPORT

Mobile support has been defined as the extension of the mutual aid system under the direction of State civil defense authorities. Mobile support forces will consist of units, with the manpower and equipment essential and swift and successful operation, organized to work as special self-contained services or teams.

These mobile units should be organized and trained with one objective—to be available for duty in their own locality, in another community, or in another State.

Mobile support teams should consist of personnel and equipment to operate such segments of civil defense services as: rescue, first aid, emergency feeding, radiological and chemical defense, engineering, police and fire services. These teams should be uniformly trained. Their leaders should be familiar with other communities in the State, in order that the teams may function efficiently in any locality where they may be required.

FIRE SERVICES

FIRE EFFECTS from current weapons would be one of the most serious threats to American cities in another war. In order to prepare for the most effective utilization of the fire services in civil defense, an understanding of the characteristics of mass fires is basic.

One type of mass fire which can result from an enemy attack is the "fire storm." A fire storm can develop in the absence of a strong ground wind after an attack that produces rapid ignition of a large, highly built-up area. Its most significant characteristic is a strong inward draft of air at ground level feeding the fire. This inrush of air, or fire wind toward the fire center, reaches galelike proportions. In such fire storms the temperatures are raised to the point where all combustibles in the area ignite, and complete burn-out occurs. The fire wind is a decisive factor in limiting the spread of fire. Fire fighting can be effective on the fringe of fire storms but not within the burning area.

A second type of mass fire is "conflagration." In the presence of a strong ground wind, a potential fire storm can be transformed into a conflagration. The chief characteristic of a conflagration is the presence of a fire front, an extended wall of fire moving to leeward preceded by a mass of preheated, burning vapors. The destructive features of the conflagration are much greater than those of the fire storm, because the fire continues to spread until it can reach no more combustible material. On the windward and parallel sides of a conflagration, fire fighting can be effective.

Both atomic and incendiary bombs are capable of producing fire storms and conflagrations. The preparations for fire defense should therefore be the same, regardless of the cause of the initial fires.

If there were no other civil defense machinery, the fire department would fight fires, perform rescue, handle victims of burning or explosions, and carry on salvage. These are among the normal peacetime duties of fire departments where they deal with a few fires at a time. Wartime requirements are so demanding that they restrict the fire service principally to the fire-fighting field.

In attacks with atomic bombs or incendiaries, fires start at practically the same time in buildings over a large area and spread over the area with incredible velocity to produce large fire storms or conflagrations. No vast increase in fire-department facilities could succeed in extinguishing such fire storms or conflagrations.

Fire departments can, however, do much to prevent the spreading of fires on the fringe area of fire storms and conflagrations, with the assistance of auxiliary volunteers, self-protection groups, and mutual aid and mobile support units. With such assistance, fire departments can be extremely effective on occasions where fire storms and conflagrations do not develop by controlling the large number of individual fires which might result. The organization of the fire service to meet such conditions is an indispensable element in national security.

ORGANIZATION

Each State civil defense organization should include a State fire chief or fire services coordinator, responsible to the State civil defense director. His duties should include: (1) development of mutual aid and mobile support plans; (2) review of local fire service plans and fire service requirements; (3) maintenance of a flow of information on fire service matters between the Federal civil defense agency and local civil defense organizations.

Each community should establish a fire services division for civil defense, built around the local fire department. In metropolitan areas a unified command of fire-fighting forces seems essential to control and direct the movement of fire companies across municipal lines. Municipal governments should perfect plans for the delegation of authority that may be required in an emergency, and the State fire services chief or coordinator should make certain these plans are adequate.

OPERATION

This chapter is not concerned with the technique of fighting individual fires, but with the extraordinary circumstances that occur in wartime fire situations.

Plans should be made to disperse fire-fighting companies, upon warning, from congested central districts of a city to outlying points.

Regardless of where the attack centers, virtually all of the companies are then in a position to return or proceed to areas around the affected district. This arrangement would prevent companies and facilities being trapped in their districts by debris, vehicles, or evacuees, and would reduce the possibility of their destruction by the action of enemy weapons. In wartime fire fighting, location of equipment is of paramount importance.

All mutual aid and mobile support fire-fighting units should be under the control of the local fire authority at the scene of the disaster.

Fire departments should make an immediate study of their housing facilities, with a view to moving to new stations of fire resistive construction preferably in outlying districts. Many cities today have found that, with the advent of fast moving fire apparatus and changes in the city's building construction and type of occupancy, certain fire stations could be closed without materially affecting the fire protection of the districts in which they were located. Abandonment of old and vulnerable stations is recommended wherever possible.

Fire department personnel should be brought up to full standard strength. An inventory should be made of all fire apparatus and equipment to determine numbers, location, age, and general condition of each type available. Such an inventory will show deficiencies which will serve as a guide in the repair of old equipment and the acquisition of new.

Planning for fire apparatus over and above normal standards, such as large standard capacity pumpers and large diameter hose, should be governed by the need for bringing water to the fires from secondary supplies such as rivers, canals, lakes, ponds, and pools. Charting, in cooperation with the engineering services, of secondary sources of water supply, and test drills utilizing these supplies, will determine the need for additional equipment.

FIRE PREVENTION BUREAUS

Fire prevention bureaus of fire departments are particularly important in time of war. Effective fire-prevention codes and building codes, coupled with strict enforcement and regular inspections, will accomplish definite results in reducing loss of life and property by fire, as well as in conserving vital resources.

The personnel of fire prevention bureaus throughout the country should be increased to the point where they can inspect carefully, and at more frequent intervals, all buildings in the areas under their jurisdiction to determine their fire susceptibility, and thereupon make specific recommendations for reduction of hazards. They should study the areas as a whole to determine whether they contain the characteristics that make fire storms and conflagrations possible.

COMMUNICATIONS

Reporting of fires, and communications between control center and fire forces, must be rapid, accurate, and subject to minimum interruption. When normal communication channels are interrupted, alternate stand-by and mobile measures must be available.

During wartime disaster conditions, many fire services from outside the disaster area may be called upon for support. Communications with their mobile units must be planned to insure control of their movements.

WATER SUPPLIES

The development of secondary water supplies should take into consideration the following types of disaster: (1) a large number of fires over a wide area, occurring simultaneously, (2) the possibility that these fires may assume the proportions of fire storms or conflagrations, and (3) exhaustion or serious curtailment of the normal water supply because of excessive demand, or because of damage to water mains, pumping stations, hydrants, or the main supply tunnels.

FIRE GUARD GROUP

In fires of wartime proportions, the public fire-fighting companies must limit their action to fighting the larger fires to prevent their spreading and resulting in greater fire destruction. A self-protection fire-guard service, therefore, is essential to cope with small fires outside the main fire area.

The duty of the fire guards is to attack and control individual fires immediately upon their outbreak in homes, buildings, and industrial plants.

The fire guards will be a part of the civil-defense organization assigned to operate under the wardens of their building, block, or industrial plants rather than as members of the public fire departments.

FIRE PROTECTION IN RURAL AREAS

Virtually all the saw timber, pulpwood, and other wood products necessary in the domestic economy are located on 600,000,000 acres of rural land in the continental United States. Domestic water supply, hydroelectric power, water for irrigation, all extremely important in the domestic economy, depend on these lands. Protection of this land against fire at all times is vital to the Nation's economy and security.

Plans should be made by the State fire services coordinator, in cooperation with appropriate agencies, to augment existing fire services in this field and to organize and instruct auxiliary fire fighters for controlling forest fires on both public and private lands in the event of enemy attack.

TRAINING

FIRE SERVICE

Each fire service must have an organized, systematic training program for its personnel, covering conventional methods of fire fighting as well as the methods needed to combat mass fires of wartime proportions. Most of the larger fire departments have drill schools, and some have provision for officer training. Additional training programs for firemen are conducted in most States under the guidance of the State department of education or a State university. National fire organizations are also contributing to the firemen's training program.

These existing facilities should be augmented as necessary for the needs of a wartime program. Present courses do not in all cases provide the education and training now necessary for fire personnel, particularly on technical aspects of wartime fire prevention, fire control and extinguishment, and fire effects of weapons. The necessity for training additional paid, part-paid, and on-call volunteer firemen will require expanded facilities and an increased number of qualified fire instructors.

Training of volunteers at the local level should be carried out by the local fire organization, preferably at the fire station, using actual

equipment and apparatus which these volunteers will employ for fire protection and fire extinguishment. Provision should be made for such continuous revision of methods and procedures as may be made necessary by new techniques.

FIRE GUARD

The training of the fire guard group organized in the warden service for fire protection of homes, buildings, and industrial plants should be undertaken separately by the fire service. The primary function of the group is to watch for fires, and to fight fires within their own residential area, building, or industrial plant. The group should be organized to lend aid to other fire-fighting units should the emergency warrant, under orders from the appropriate civil defense authority. At such a time the group would come under the authority of the chief of the fire forces at the scene of the emergency.

THE LAW ENFORCEMENT SERVICES

IN THE EVENT of enemy attack the police will be called on to perform special civil defense duties in addition to their regular activities of protecting the public and preserving order. Only if the police carry out successfully these regular duties will it be possible to perform effectively the many other services of civil defense. Accordingly, plans should be made now for recruiting, training, and equipping police services for special emergency duty.

In addition to their civil defense responsibilities during an emergency, it will be necessary for the police services to cooperate with the Federal Bureau of Investigation. The FBI nationally coordinates police action in internal-security programs which concern sabotage, espionage, and subversive activities. State and local police thus share with the Federal Bureau of Investigation, and the Department of Defense, the responsibility for internal security. Civil-defense organizations should not establish intermediate agencies on internal-security matters, and law-enforcement personnel should report directly to the nearest representative of the FBI any information relative to espionage, sabotage, subversiveness, or similar matters affecting internal security, in accordance with the President's directive of July 24, 1950.

FUNCTIONS IN MOBILE SUPPORT PROGRAM

In case of disaster, a large number of trained men and special equipment must be mobilized at a given point in a short period of time. Our 170,000 peace officers are dispersed among thousands of separate units of government, each of which is separately administered and supported. As a result, very few police forces have sufficient numbers to constitute an effective force at the scene of a major emergency.

The solution to this police decentralization is a plan for mobilizing and coordinating regular police resources and supplementing them with trained volunteer auxiliary forces.

Volunteer forces should not be hastily organized, clothed with police authority, and armed with police weapons. All auxiliaries should be

carefully selected and trained before participating in police activities.

Police forces should not be consolidated, because such action would lead to confusion, and disregard of local self-government. A separate administrative plan of police mutual aid and mobile support providing for police mobilization should be developed which will mesh temporarily the decentralized police forces into one functioning instrument of coordinated forces at the scene of disaster.

STATE ORGANIZATION

This type of police mobilization should be carried out through the office of the governor. When appropriate, the governor should designate the head of the State police or highway patrol to work closely with the State civil defense director, in order to coordinate the civil-defense activities of State, county, and municipal law-enforcement officers.

The State should be divided into police civil-defense areas. The governor or the head of the State police should designate a police coordinator for each area. This coordinator should be an experienced police official, from State forces or from the larger urban centers.

The duties of the police area coordinators will be varied and will encompass all phases of civil defense as they affect police. The coordinator should appraise and compile the police resources of each area. This information should be circulated throughout the State in order that the governor, the police coordinators, and the State and area civil defense directors may have a clear, simple, and comprehensive tabulation ready for immediate and effective use.

All volunteer auxiliary forces should be listed. In the event of mobilization of regular police for an emergency, the auxiliaries may be called upon to assume many regular police duties. Such forces should be integrated with the regular police organization. The inventory of police resources should include various major items of police equipment. Sensitive points within the area such as power plants, water facilities, bridges, highway bottlenecks, and communication centers should be identified, and plans made for their protection.

The police coordinator should be given the duty of arranging detailed mobilization schedules, supervising the reserve recruitment of men over the draft age for police duties, indicating the need for connecting links in police communication systems, arranging for

procurement of necessary police equipment and stimulating special training of all police units. All such inventories, appraisals, and plans should be filed with the governor and State civil defense director.

When police mobilization is ordered, the local police administrator should command the mobilized force made available by the civil defense authority.

LOCAL FUNCTIONS

The local police administrator must be prepared to cooperate fully with and to advise the civil defense director. He will have to carry out training programs, recruit volunteers for auxiliary forces, aid in district inventories, and work closely with the police area coordinator and the local director of civil defense. He should see to it that plans are made for his force to participate in State-wide mobile support.

SPECIAL CIVIL DEFENSE DUTIES

Police services must be trained in the various methods and techniques for civil defense. The following are recommended as subjects for special attention.

PREVENTION OF PANIC

Panic resulting from enemy attack may well be the most difficult of all police problems. Therefore, police personnel, including auxiliaries, should be trained to handle panic situations. It is advisable to schedule practice drills, with public participation.

COMMUNICATIONS

Disruption of the police communication system will not only impair the effectiveness of the police force, but may mean also the loss of additional lives and property. It is vitally important therefore that all possible alternate and auxiliary communications systems be developed. In many States and communities, the police short-wave radio system is the only mobile means of communications.

All such equipment, plus trained dispatchers, should be well guarded, expanded as necessary, and auxiliaries should be trained in all phases of operation.

TRAFFIC AND HIGHWAY CONTROL

Wartime conditions require special regulation and control of traffic. The police services must maintain the orderly movement of pedestrians and vehicles in cities and suburban areas. Accordingly, the police services should work with the transportation service in establishing control points and taking necessary steps to regulate traffic, so that it will move over the highways on regulated schedule.

Routes should be designated through large urban centers, and plans and procedures made for dispatching convoys and operating traffic under controlled dispatch and priorities over the transportation network.

Police training should include measures to be taken at the time of an alert, including the control of panic traffic, and the keeping of certain thoroughfares free from obstruction for both civilian and military movement.

In addition, there must be provision for the limitation of movement of persons and vehicles, both during and after an emergency.

POLICE PERSONNEL

Requirements for additional full-time police personnel will be materially increased. Requirements for the Armed Forces may deplete existing police services and hamper the recruitment of qualified personnel; therefore it may be desirable to employ, on a temporary basis, persons ineligible for military service, and also overage or retired persons with a background of police experience; and to recruit women for such tasks as communications, traffic detail, and other duties.

AUXILIARIES

Many communities have auxiliary police who support the regular police in handling traffic, parades, celebrations, and unusually large crowds. These can be utilized in civil-defense work. Actual needs will depend on local conditions, critical target areas, mobile support arrangements, and other factors. Command functions should not be assigned to auxiliary police except in extreme emergency.

MISCELLANEOUS DUTIES

Other functions to be performed by the police services during an emergency include: Prevention of looting, enforcing civil-defense regu-

lations, assistance in identifying the dead, and the issuance of passes and permits.

BOMB RECONNAISSANCE

The reconnaissance of unexploded bombs is a special civil-defense function of the police. They should be prepared to receive reports of unexploded bombs from the public and other civil-defense services, send bomb reconnaissance officers to check the reports, and, where necessary, effect adequate safety precautions.

It is possible that delayed-action (time) bombs will be used. Such bombs are designed to detonate hours, and even days, after the raid has taken place. It is necessary to classify all unexploded bombs as time bombs until technical examination proves them otherwise.

Slowness or failure to report the presence of unexploded bombs to the military may result in loss of life, injury, and avoidable damage. The training of personnel who are responsible for the reporting of unexploded or delayed-action bombs must be painstakingly thorough. Prompt action, accuracy, skill and cooperation are essential.

The police will be responsible for bomb recognition, i. e., locating and reporting to the military unexploded bombs or missiles, as well as the application of safety precautions at the site of the unexploded bomb or missile. The actual disarming and disposal of unexploded bombs is the responsibility of the Armed Forces.

HEALTH SERVICES

(Including Special Weapons Defense)

MAINTENANCE of usual health services during wartime is the responsibility of existing health agencies and individual professional and technical health experts. The relief of suffering immediately after a civilian wartime disaster, the provision of emergency lifesaving measures, the preservation or restoration of health services normally existing in peacetime, are the responsibilities of civil defense.

In view of technical and professional requirements, the civil defense health and medical measures and services must continue to remain a responsibility of existing health agencies and individuals. These agencies and individuals will perform their wartime functions under civil defense rules and regulations.

Close liaison between civil defense organizations and peacetime health services is therefore imperative. Existing health agencies should, in wartime, be responsible for civil defense health requirements so that creation of new duplicating agencies will be avoided.

This principle has been followed in the planning of Federal civil defense health services. The United States Public Health Service has agreed to provide medical and other officers to staff Federal civil defense central and regional offices.

Initially this function may be carried out through the health personnel assigned to existing Federal Security Agency regional offices. Later the function will be moved to wherever the Federal regional civil-defense offices are established.

In each State, the State health officer should be placed in charge of all State civil defense health and medical services; and cities should appoint local health officers in the same manner.

These officers should be integrated into the State and State area civil defense organizations. In addition, the State civil defense advisory council, if created, should include representatives of each of the major State organizations of professional health experts. The members of these organizations would contribute personal services ex-

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tensively in time of a disaster, and their advice and assistance during the planning stage will be invaluable.

An enemy attack on American cities using new technological weapons might introduce some new medical and health problems from such effects as radiation and chemical and bacteriological contamination. In the majority of cases however, such an attack would only multiply many times the recurrence of familiar problems.

Training for professional, technical, and auxiliary lay personnel will be necessary to prepare for the new problems. Thorough organization will be necessary to provide adequate professional and technical personnel; and also the supplies, hospitals, and related facilities for the care of the many thousands of casualties which could occur among the civilian inhabitants of a large city.

This increase in casualties will require many auxiliary volunteer workers to be recruited and trained, in order to supplement the services of available professional and technical personnel.

ORGANIZATION OF HEALTH AND MEDICAL SERVICES

A single organizational blueprint could not apply equally to every State, or local community. For this reason, health and medical services are described in functional rather than organizational units. The functions of each service are discussed below in general terms only. The specific technical information required will be covered in separate manuals at an early date.

Each of the services listed is sufficiently important in the over-all program to require direction by a separate chief reporting to the public health officer. Smaller cities may desire to combine some of the services in various groupings to conform to available health department personnel or local organization pattern. On the other hand, larger metropolitan cities may wish to divide the enumerated services into still smaller categories.

First-aid and ambulance services.—In certain areas designated by State civil defense authorities, a complete system of first-aid stations should be devised. The locations of these stations should be preplanned, using meeting halls or other assembly places.

Emergency equipment stored at fringe-area hospitals and other storage areas should be transported promptly in vans to implement the stations' functions. In the event that suitable buildings are not

available, the vans themselves could serve as first-aid stations. Physicians, dentists, pharmacists, first-aid workers, litter bearers, and nurses should be assigned to these stations in the advance planning.

Emergency life-saving measures would be initiated in these stations. To the extent possible, casualties would be screened according to further needs for treatment.

First-aid stations would serve also as ambulance stations. Ambulances usually would be trucks, station wagons, buses, or any other motor vehicles fitted so as to be readily adaptable for carrying litters.

Competent dispatching service will be required to route casualties needing further treatment from these first-aid stations to other treatment centers, and to direct the ambulances. A dispatching service attached to the controlling health officer's staff will coordinate transportation requirements with the transportation service and control the distribution of ambulance cases to the proper hospitals.

Emergency hospital systems.—Three types of hospitals are recommended:

(*a*) Improvised hospitals: Preplanning will require a complete inventory of facilities around critical target areas to determine available space which can be converted to hospital use. In general, these should be in school buildings. Use of hotels and apartments is not recommended.

Emergency equipment such as beds, instruments, and medical supplies should be placed in condition for ready shipment from storage points to equip the hospitals. Staffs for the improvised hospitals, including volunteer workers, should be drawn from nearby areas to treat cases of shock and burns, for performing surgical procedures, and for other miscellaneous services.

(*b*) Undamaged existing hospitals: These might be reserved and staffed for casualties which require major surgical procedures of a type too difficult to be performed in improvised hospitals.

(*c*) Existing hospitals in nearby and distant communities: These should be used for all purposes for patients who can be transported to them. People exposed to dangerous amounts of radiation, but with no other significant injuries, should be transported to the distant hospitals in designated taxis, buses, or private automobiles, in order to assure them adequate treatment at the onset of radiation sickness. Vehicles employed for this pur-

pose should be suitably labeled, and monitored frequently by the medical radiological monitoring organization.

All hospitals should have available emergency water, electrical, and gas supplies in event of the failure of normal supplies.

Casualty services.—Casualty services are made up primarily of surgical teams, including shock treatment and burn treatment units. These teams should be organized locally, and if necessary supplemented by teams from other cities, organized as affiliated hospital units. Personnel for such teams should include general surgeons, operating room nurses and anesthetists for casualty services in either existing or improvised hospitals. Specialized surgical teams should also be organized for work in existing hospitals.

Health supplies.—A system of distribution of health supplies, including drugs, chemicals, instruments, equipment, antibiotics, biologicals, and surgical textiles should be established. Hospitals are encouraged to increase current stocks to be better prepared for disasters.

Major atomic bomb attacks on large metropolitan areas would cause casualties requiring a surgical supply demand far beyond normal availability. To meet such requirements, stores of certain items will be established.

Adequate local storage of all such supplies would be excessively expensive, would duplicate precious supplies and would require great numbers of skilled supply workers. Federal stockpiles of these items are therefore planned to augment existing supplies. Where necessary, they will be located outside critical areas, but will be readily accessible by rail, truck, and air shipping facilities to more than one critical area.

Blood services.—Major responsibility for national coordination of donor recruitment, blood procurement, storage, processing, and preparation for shipment has been assigned to the American National Red Cross. The cooperation and assistance, however, of some 1,500 non-Red Cross blood banks in the United States is necessary to the success of the program.

Where non-Red Cross organizations have established State or local blood programs, they are urged to participate in the Nation-wide program. In localities where there are no blood banks, steps should be taken promptly to establish them. These banks should be coordinated into the national blood program.

Federal storage depots and processing plants are planned. They will be located strategically, so as to give maximum service to the various regions.

Transportation of blood within the State is the responsibility of the State civil-defense transportation agencies. Shipment of blood from the Federal civil-defense supply depots will be a Federal civil-defense responsibility, subject to Public Health Service interstate shipping standards for biological products.

Local distribution and transfusion of blood and blood derivatives should be the responsibility of local civil-defense health agencies. The United States Public Health Service and State health departments are responsible for the licensing and technical regulations within their jurisdictions.

Laboratory services.—Laboratory services are necessary for such functions as blood matching, clinical, public health, and sanitation laboratory measures, and for functions relating to monitoring of biological and chemical warfare. These services should be supplied through local or nearby laboratories, or through regional laboratories to which specimens requiring special techniques could be readily shipped.

Federal mobile laboratories are under consideration in order to insure prompt laboratory service at disaster areas.

Sanitation services.—Preservation of the health of the surviving population after a disaster is vital. In this field the sanitation services are needed.

The following basic responsibilities, utilizing aid from adjacent communities, should be planned for:

(*a*) Maintenance or restoration of water sanitation, plus safe treatment of temporary emergency water supplies.

(*b*) Adequate food sanitation inspection during emergency, especially the inspection of emergency kitchens and canteens; also foods which may have become contaminated through the effects of atomic, biological, or chemical weapons.

(*c*) Extension or revision of existing milk sanitation regulations, in anticipation of the possibility that local pasteurization plants might be disabled, to prevent a lack of milk from causing additional infant deaths.

(*d*) Maintenance or restoration of sanitation standards in dis-

posal of sewage and solid waste. This might have to be accomplished despite the loss, or diminution, of water supply.

(*e*) Regulation of sanitation in shelters and emergency billeting.

(*f*) Decontamination measures relating to atomic, biological, or chemical warfare.

(*g*) Control of rodents and insects which carry disease, destroy food, or become serious general nuisances.

In order to carry out these responsibilities both during and after a disaster, the local sanitation services would require volunteer workers. Such volunteers should be trained in specialized fields, and should be given necessary authority to perform their specialties.

Nutrition services.—The nutrition services are responsible for planning emergency diets and food priority systems. These diets and food priority systems would be used as guides for that branch of the welfare service responsible for supplying food in any emergency period following a civilian wartime disaster. Milk rationing would be the most urgent consideration.

It is suggested that the State health officer, with the assistance of the Public Health Service, establish the standards for nutritional services. Information for establishing such standards is available from the Department of Agriculture and the Federal Security Agency.

Medical services.—Medical services must be planned to assure a reasonable degree of noncasualty care for survivors who were ill before the disaster, or who became ill following the disaster. The chief categories of such services would include industrial health services, mental health services, obstetrical services, pediatric services, and emergency medical care.

Veterinary services.—The usual veterinary services, supplemented as needed by trained civil defense volunteers, are essential at time of disaster and are responsible for the following:

(*a*) Protection of food animals, especially in event of biological warfare. Care must be taken against contamination of the animal, or the crops eaten by the animal.

(*b*) Management of problems created by pets and other small animals, and by animals in zoos and similar institutions.

(*c*) As usual, the Federal responsibility for meat inspection will attach to the Bureau of Animal Industry, State services to the

State veterinarian, and local services to either the State veterinarian's staff, or the local health department.

Records.—Local civil defense health organizations must keep uniform records of all medical evacuees, of all injured and ill persons, and of the dead.

These records should be a part of health department vital statistics, and the current program of reporting diseases should be augmented to discover increased incidences of diseases which may result from biological warfare. Service records shoud be maintained of all personnel working on this aspect of civil defense, both regular and volunteer.

Morgue services.—Provision is imperative for adequate morgue and identification facilities. This activity should be under the general supervision of the local civil defense health services. Plans should include provision for prompt removal of the dead from damaged areas by the rescue services, and from badly needed hospital facilities by the health services.

It will be necessary to establish temporary morgues, where the dead may be identified and prepared for burial.

The welfare services should be assigned the responsibility for notifying bereaved relatives and for giving sympathetic assistance.

Regardless of the scope of the disaster, local funeral directors should do their best to provide mortuary services. The preparation of graves should be the responsibility of the engineering services.

Health transportation services.—The local civil defense transportation service should be responsible for providing all transportation for the health services, for establishing dispatching centers, and for operating and dispatching all vehicles. This local office would be subject to direction from the State area control center.

To assist in this activity, health service representatives should be stationed at dispatching offices.

Types of essential transportation include first-aid station vans, emergency ambulances, morgue trucks, casualty evacuation and hospital-patient evacuation vehicles, and travel means for essential health personnel. The health services are responsible for advising the transportation service of their needs. The health services should also recommend modifications which should be made to vehicles in order to adapt them to specific medical functions.

COMMUNICATIONS

It is essential that there be liaison with the civil defense communications service to insure adequate communications from the health services. There should be adequate communications between control centers and radiological monitoring teams, first-aid stations, ambulance stations, hospitals, and the transportation dispatching center.

TRAINING

Training of health personnel should follow the same general pattern as for other services. Training would be accomplished in steps, so as to train the maximum number of people with minimum dislocation of their normal activities.

As an example, courses in the medical aspects of atomic warfare have been conducted for key State medical school faculty members, by the Federal Government, thereby qualifying them to become instructors. The trainers should conduct courses for people in the larger cities in order that the latter can become instructors. This new group should then be responsible for training local professional health personnel in their own cities and nearby towns.

To assure the technical accuracy of training materials, it is recommended that States and localities do not begin training courses for professional and technical personnel until the Federal civil defense agency has completed and issued training manuals for teachers. These manuals are in process and will be ready at an early date.

All health-service personnel should receive training in general civil-defense organization and administration. Additional courses for certain professional and technical personnel will be necessary, in one or more of the following specialized fields.

(*a*) Medical aspects of atomic warfare.

(*b*) Radiological safety.

(*c*) Radiological monitoring.

(*d*) Biological warfare monitoring.

(*e*) Chemical warfare, including the training of physicians to treat chemical warfare casualties, the training of sanitary engineers in decontamination measures, and the training of monitors.

(*f*) Special methods of treatment, particularly the mass treatment of burns.

First-aid courses for the general public will be given. Such courses have been accepted as the responsibility of the American National Red Cross. It is anticipated that several million Americans will be taught civil-defense first-aid measures. All civil-defense workers should take these courses.

DEFENSE AGAINST SPECIAL WEAPONS

Special measures which must be taken to enable civil-defense organizations to deal with the problems arising from atomic, biological, and chemical warfare are mentioned throughout this plan. The effects of these special weapons are of such a nature that defense against them becomes primarily the responsibility of the health and medical services.

Since detection of radiological, biological, or chemical agents involves skills and facilities which should be supervised by the health services, the basic responsibility for planning State and local defense measures against the effects of such weapons should be assigned to the health services, but with other services participating wherever their functions are involved.

Some of the measures which must be taken for treatment of casualties in atomic, biological, or chemical attacks have been discussed earlier. Training courses for personnel of the health services will include extensive instruction in the effects of special weapons. Determination of medical supply requirements must take into account the nature and extent of casualties to be expected from each type of special weapon.

Laboratories equipped to undertake special analyses will be required to determine the occurrence, and extent, of biological attacks.

In the event special weapons are employed, sanitation services must be prepared to undertake protective and decontamination measures. In addition, a new branch of the health services needs to be organized in each State and locality—the monitoring services. These are of three types:

1. *Radiological monitoring service.*—In order to insure their safety, all civil-defense personnel assigned to areas where radiological contamination is present should be issued radiological dosage devices by the appropriate branch of the medical service of the local civil-defense agency.

After an atomic attack, conduct of immediate survey work, as well as the supervision of protective measures, will be the responsibility of radiological monitoring teams of the local civil-defense health service.

Radiological monitoring instruments for immediate survey work will consist chiefly of high-range counters. These instruments should be stored locally for use of the local monitoring teams.

Specifications for both individual dosage devices and high-range counters will be provided by the Federal civil-defense agency.

Continued survey work in the days following a disaster will require special instruments used under the supervision of specially trained personnel. For these surveys laboratory services will be provided through Federal mobile laboratories, or by shipment of samples to Federal laboratories. In some States, the State civil-defense health agency may supplement these services.

The local radiological monitoring teams would work under the direction of Federal and State personnel to assist in carrying out these continued surveys.

2. *Biological monitoring service.*—Biological sampling and laboratory analysis should be the responsibility of local health department laboratories. Exact identification may be referred to State and Federal Public Health Service laboratories.

Monitoring and other protective services for biological warfare against food animals are the responsibility of the Federal, State, and local veterinary agencies. Similar services to protect crops against special weapons are a responsibility of the Federal, State, and local agricultural agencies.

3. *Chemical monitoring service.*—Chemical monitoring should be the responsibility of local health departments, through monitoring devices or teams, and of individual physicians, through recognition of clinical symptoms of victims.

EMERGENCY WELFARE SERVICE

UNDER wartime disaster conditions, many self-sustaining families and individuals may suddenly find that they have to depend temporarily on others for even the simplest essentials of life. After a disaster, a family may be left on the street without housing or adequate clothing, with no place to eat, wash, or sleep, with no means of transportation and perhaps without money or the ability to care for immediate needs.

An emergency welfare service will be necessary in the civil defense program to help reestablish families, provide emergency housing, food and clothing, locate missing persons, and care for infants, children, the aged, and the sick.

In atomic disasters, thousands of families may be affected. Welfare services are essential in order to restore civilian morale as quickly as possible.

Families or parts of families may have to be evacuated and helped in adjusting to strange households and communities.The community which receives evacuees will need to assess its social services and expand them to support the morale of the evacuees and the receiving households. Continuing enemy attack may necessitate extensive mass feeding, clothing, and shelter, but every effort should be made to move as rapidly as possible to individualized treatment of personal or family needs. To do this, every community should prepare, in advance, its welfare-service program for civil defense.

Functions of the welfare service are outlined below.

REGISTRATION AND INFORMATION

Registration and information units, part of the welfare service, would obtain and maintain information concerning affected civilians, separated families, homeless persons, and individuals and families receiving mass care and other aid. The units would furnish information to individuals, to other civil defense divisions, and to cooperating agencies caring for affected civilians. They would answer inquiries con-

cerning the welfare of individuals and families, referring families and individuals to other appropriate welfare services, and referring inquiries on other than welfare matters to appropriate agencies.

Personnel to operate this service should be enlisted from social-work agencies. Additional staff, as needed in actual emergencies, should be secured from community volunteers and given necessary training in standard procedures.

In all communities within critical target areas it is necessary to plan district centers which will correlate registration and information services; and, through the warden service, educate all local residents in procedures to follow in event of disaster.

MASS CARE

Mass feeding, clothing, and shelter may be needed by large numbers of persons in postattack situations. These will be similar to the disaster services provided by the Red Cross in peacetime. For that reason, the Red Cross can assist materially in planning for these services. Information, referral services, and guidance on an individual or family basis should be provided. Each individual and family needs help to move back quickly to independent living.

MASS FEEDING

Plans must be made for mass feeding of all civilian evacuees from the disaster area at assembly areas, en route, and at reception centers. These plans must also be related to plans for emergency shelter. Wherever possible, food and shelter should be provided at the same facility.

A survey should be conducted throughout the area of each local civil-defense organization to list all eating establishments, commercial and private, their normal feeding capacity and possible degree of expansion, also all other feeding facilities, including mobile canteens and food trains, available cooking and serving equipment, food supplies (retail, wholesale, and Government), also persons experienced in preparing and serving large quantities of food.

Mass-feeding menus should be secured in advance from the health and medical services. An additional step should be the negotiation of agreements with private food-facility owners for the use of their establishments and for the release of supplies and equipment, when needed, for emergency feeding.

Inventories of such facilities, equipment, supplies, and personnel, together with copies of negotiated agreements, should be used by local and State civil defense agencies in planning mutual-aid operations.

EMERGENCY HOUSING

Planning should provide for temporary mass shelter following attack, and also subsequent rehousing. Although such shelter is essential to care for the homeless for brief periods, it should be terminated by family rehousing at the earliest possible moment.

Mass housing or rest centers will have to be provided for uninjured persons, as well as for the ill and injured who have been forced from their homes. Housing facilities for the latter group, however, should be selected and set up in cooperation with the medical and health services.

The second stage of housing operations involves rehousing of homeless individuals and families in homes of friends and relatives, in the homes of others who volunteer space, and in unoccupied or partially occupied houses and buildings. The duration of such housing will vary, depending on the course of the war, relocation of the individual and family in other industrial and residential areas, and the initiation of permanent reconstruction programs.

In cooperation with housing authorities, a survey should be conducted of all available facilities for rehousing. Cooperation of the warden service, plus volunteers experienced in hotel, settlement, and building management, should be enlisted to record the potential capacity for housing of the homeless in private homes, apartments, etc.

Besides taking inventory of the type, location and capacity of available buildings, the survey should note structural soundness, degree of safety from the effect of possible enemy attack, and adequacy of water, heating, sanitation, lighting, cooking, serving, and storage facilities.

Appraisal of potential mass-care facilities should consider such necessary equipment as cots, blankets, emergency lighting, toilet facilities, and general maintenance items.

EMERGENCY CLOTHING

Emergency clothing must also be provided. Inventory should be made of all available clothing supplies from both retail and wholesale

outlets, and arrangements made for immediate procurement, if necessary. Essential garments should be listed according to population groups. Copies of the completed inventory, and of negotiated agreements for the release of clothing stocks, should be made available to the State civil defense authorities for mutual-aid purposes.

WELFARE SERVICE IN EVACUATION

As mentioned previously, evacuation involves the removal of priority groups such as school-age children, mothers and preschool youngsters, pregnant women and the aged and infirm. Moving such groups from a designated vulnerable community to another community on a voluntary or compulsory basis usually confronts each individual involved with personal and family problems.

Welfare services in evacuation should include:

1. Arranging for the material needs of families and individuals who are themselves unable to provide sufficient food, personal necessities, clothing, equipment, and other essentials during the period of pre-attack evacuation.

2. Attempting to preserve as far as possible the values of normal group associations such as the family, the neighborhood, and the school.

3. Helping persons threatened by the prospect of change, separation, and danger to adjust themselves to the experience, through sympathetic discussion and concrete help in meeting their individual situations.

4. Helping communication between evacuees and persons remaining in the evacuated center.

WELFARE SERVICES IN RECEPTION AREAS

Welfare services in reception areas are responsible for the following functions:

(*a*) Selection of homes;

(*b*) Placement of evacuees in private homes, camps or other facilities for group care;

(*c*) Providing information for evacuation headquarters regarding the arrival and address of evacuees;

(*d*) Continuing supervision of all evacuees while under care;

(*e*) Casework services as necessary;

(*f*) Cooperation with health and medical services to provide necessary medical care and health supervision;

(*g*) Cooperation with educational authorities to assure school attendance;

(*h*) Investigation and assistance to provide employment opportunities;

(*i*) Organization of special community facilities such as social centers, communal feeding centers and laundries, nursery centers and recreation facilities to assist in adjustment of evacuees, especially mothers and children.

In all these functions, the welfare service should maintain standards laid down by evacuation authorities.

The sudden addition of a considerable number of persons to the life of a city, town, or village will require consideration of all aspects of community life. Crowded houses and school buildings, and the temporary use of buildings not adequate for housing purposes, place an extra responsibility on the departments responsible for safety and fire protection. Epidemics are more easily spread under crowded conditions. Added precautions by health authorities are therefore required.

Evacuees unacquainted with their new surroundings will add to the responsibilities of the police and protection agencies in maintaining order and in assisting the orderly flow of community activities.

The extent and method of adapting the organization and operation of community resources to emergency needs will vary. No community is so amply provided with resources that it can absorb any considerable number of evacuees without extending existing facilities and services. Reception districts will vary widely, both in the extent to which increased service will be needed, and in the ways in which these additions can be provided.

Information will have to be collected concerning the location and services of public welfare agencies, private family and children's agencies, institutions providing for children and the aged, recreation agencies, public health agencies, hospitals providing in-patient or out-patient services, agencies providing home medical care, present school enrollment by grades, number of instructional and other school personnel, health services provided by the school system, numbers of children in existing classes, and possibilities for expansion or doubling up on school sessions.

On the basis of such information, plans will have to be made for expanding and adapting the programs of existing agencies, organizations, and institutions to meet new demands.

SERVICES FOR INDIVIDUALS AND FAMILIES

The term "welfare service" is used to cover the essential activities involved in providing material assistance and other help on a temporary basis to individuals or families until they can reestablish themselves and take up their normal activities in home and industrial life.

Material assistance in civil defense is a temporary, emergency program designed to provide civilians with food, clothing, shelter, fuel, cash, household equipment and supplies, transportation, medical care, and other items required to enable people to return promptly to productive activity.

Other welfare services include:

(*a*) Providing for rehousing or settlement for individuals and families uprooted from their homes.

(*b*) Furnishing information to individuals on help that is available to them, and where it may be obtained.

(*c*) Assisting persons to take advantage of insurance or other benefits to which they are entitled.

(*d*) Referring persons to available employment, retraining, vocational rehabilitation, medical services, and specialized child welfare services.

(*e*) If necessary, providing for children to be separated from their parents on the best basis possible and with the least shock.

FEEDING OF CIVIL DEFENSE WORKERS ON THE JOB

Related to mass feeding of the homeless, but calling for a separate organization and separate facilities, is the problem of feeding civil defense workers on the job. Fire fighting, rescue, engineering, and other crews may be engaged for many consecutive hours.

At the scene of attack it is the responsibility of the welfare service to organize feeding facilities including mobile facilities. Mobile support units from other localities should be self-sufficient to this end at least for the first 2 days. After that period any such groups may have to be included in the feeding program.

TRAINING

A disaster will create conditions which require the services of all trained social workers, plus large numbers of voluntary personnel. The State and local governments should now develop training methods for such a supplementary staff, in order that the communities will be ready when an emergency occurs.

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ENGINEERING SERVICE

AN ENEMY attack with atomic weapons on a large American city might well present emergency engineering problems of a magnitude not previously experienced in the United States. Essential services such as communications, power, and water supply would be disrupted and debris in thousand of tons would fill streets and highways, blocking access to damaged areas.

To cope with these problems, each local civil-defense organization should include an engineering service responsible for planning the use of, and coordinating and directing in action, all personnel, equipment and material assigned to engineering and construction work during the emergency period immediately following a disaster. Many of these activities are primary responsibilities of the engineering service. Others are in the nature of assistance essential to other civil-defense services in carrying out their assignments. There should be an engineering service representative on the staff of the State civil defense director to assist local organizations in planning and in formalizing mutual aid and mobile-support assistance.

PREATTACK FUNCTIONS

Some of the more important preattack functions of the engineering services are the adoption of precautionary measures to safeguard water, gas, electricity and food supplies, and sewage and waste-disposal systems; application of protective design standards; and assistance in the organization, training, equipping and operating of the rescue service, control of illumination, and other passive defense measures if required.

Water supply systems have critical elements, which if damaged may put the system out of service or render the supply unfit for use. Study of local supply systems may indicate the need of alternate supplies and the provision of special tests to provide information on purity. Stockpiles of materials for emergency repairs may be necessary as well as stand-by equipment, auxiliary power, and tank trucks for emergency supplies.

Sewage-disposal systems require precautionary protective measures. In the event the sewage-treatment system is seriously damaged, provision must be made for alternate means of disposal. Such a plan must include the consideration of water failure and the necessity for military-type field latrines or other emergency disposal methods. Special consideration must be given to the problems presented by hospitals, dormitories, large apartment buildings, large office buildings, and evacuee camps. For garbage and waste disposal, sanitary fill as an alternate to garbage plants should be planned. Special attention must be given to sanitary requirements for the temporary housing provided for the large numbers of homeless people within or near the city involved in the disaster. Local studies must also decide what should be done about sewage, chemicals, inflammable liquids, and other sources of pollution that may enter streams.

As another phase of preattack planning, the engineering service must maintain close liaison with the various governmental and technical agencies developing improved techniques for protective construction and should furnish advice and information to other civil defense services in industries and utility companies, and to the general public.

Personnel and important equipment in plants may be given an effective degree of protection against blast and fire by strengthening of walls and roofs, improvement of fireproofing, and similar measures. Fuel storage tanks and containers of chemicals and gases will need special consideration, as will steam plants and electric power supply equipment.

Protection of personnel at home, at work, and in public places must also be considered. Owners and tenants of all types of buildings must have information as to what is effective and feasible, and should be encouraged to undertake reasonable precautions at their own expense. See chapter 10, "Shelter Protection" for more detailed discussion.

The resistance of individual buildings and the city as a whole to bombing attacks may be improved by adjustments in building codes, zoning ordinances and city planning policies. To this end, each city should particularly consider its plans and regulations governing materials of construction, size of building lots and space between buildings, height of structures, density of population, width of streets, location of parks and other firebreaks, and location of hazardous industries.

POST ATTACK FUNCTIONS

During the emergency period immediately following an enemy attack the engineering service would be called upon to perform numerous functions to facilitate fire fighting, evacuation and other activities, and to perform minimum emergency repairs to essential service facilities.

The functions of the engineering service following an attack would include the following:

1. Assisting the rescue service;
2. Clearance of debris and demolition of structures to gain passageway, create firebreaks, and remove hazards;
3. Construction and repair necessary for essential emergency restoration where skilled mechanics and substantial quantities of material or major pieces of construction equipment are required.

These services will operate during the period of emergency only, and personnel and materials must be used at such time on either public or private property as dictated by the general welfare. The urgent need for immediate emergency repair and at least partial restoration of normal community services may dictate the assignment of men, material, and equipment to assist a power company in returning an electric power plant to service or to aid telephone and radio companies in restoration of emergency services. Or, since transportation facilities are vital to civil defense, it may be necessary to aid a railroad in rebuilding track or other facilities, or to perform emergency repair for docks or airport facilities. Numerous other services which are normally furnished by private agencies but are essential to the general welfare (such as cold storage and food distribution centers, hospitals, laundries, undertaker service, and filling stations), may have to be given assistance to restore them immediately to minimum operating condition. It may be necessary to aid the welfare service in providing evacuation centers, and to aid the health service in equipping emergency hospitals with power, water, and sanitary facilities. Advance planning and agreements relating to work on private property will facilitate action in the emergency.

SUPPLY

An adequate supply of tools and materials necessary to permit use of the total available manpower in a disaster area should be provided.

The kind and amount of tools and materials will vary with the location. All cities should inventory their supplies, including all those of private organizations. The State engineering service coordinator should see that provision is made for procurement of additional items required over and above inadequacies of mutual aid and mobile support equipment. These may be stockpiled under State control rather than by each locality. Items in critically short supply should be secured through the State procurement agency in collaboration with the Federal civil-defense agency.

ORGANIZATION

Performance of the functions discussed above will be possible in time of disaster only through coordination of all resources of the engineering and construction industry and allied activities. At the time of disaster, all essential services will require more resources than they normally have at their disposal. This must be anticipated, through advanced surveys made of the construction and engineering industries' personnel, equipment, and usable material, and through careful planning for their emergency mobilization.

The volunteer forces to be coordinated by the engineering service include all personnel skilled and experienced in the construction industry or in the use of construction equipment such as cranes, bulldozers, dump trucks, welding machines, and explosives. In addition to this pool of mechanics and equipment operators, provision must also be made for large contingents of labor which may or may not have had experience in the construction industry. This labor, established or improvised as "Pioneer units" and integrated with the skilled and experienced engineering personnel will be most essential to the engineering services. All maintenance and construction forces, both public and private, will be involved in civil-defense activities either with prime responsibility for a specific task, or as a major assistant to other services. Organizational plans and procedures must be developed at the local level for the mobilization of personnel and equipment of public works and utility departments, contractors, equipment and material dealers, industrial maintenance and construction groups, utility companies, labor unions, engineering schools, and other groups that have at their disposal skilled workmen, experienced supervisors, construction equipment, tools, and material.

As far as possible, men should be utilized as members of organizations in which they normally work, and assigned to tasks for which they are qualified. The engineering service should maintain a continuous record of the amount and location of resources in men, material, and equipment so that in an emergency the service can give immediate directions as to where, when, by whom, and in what order tasks are to be performed.

Wherever possible, there should be preassignment of work, including alternate assignments. A large percentage of people working for utilities, public works departments, and industrial corporations would be engaged in their normal employment activities. However, through local agreements all volunteer engineering service workers should be subject to reassignment to meet emergency conditions and to conform to the priorities established by the local civil-defense director.

Provision should be made for the assignment by the engineering service chief of men and equipment to other services on their request or by direction of the local civil-defense director. In general, however, the other services should request the performance of specific tasks rather than just assignment of personnel. The tasks would be performed under direction of the engineering service.

Mutual-aid and mobile-support plans should include provisions for engineering services.

It is appropriate that responsibility for the various phases of preattack engineering planning be delegated to the existing engineering units having responsibility for varied specialties. The problem of coordinating these activities is simplified when all specialties are centralized in one engineering department, but when specialties such as water supply, sewage disposal, or highways are established as independent organizational units, they should be coordinated by the local civil-defense director.

From the beginning, however, planning for the engineering service must be based on the concept of unified local control and coordination of all resources.

The principal responsibilities of a State civil-defense engineering service will be (*a*) to assist local engineering services to organize adequately, (*b*) to develop mobile support plans within the State, (*c*) to arrange for coordinated use of existing supplies, and (*d*) to arrange for procurement and storage of reserve stocks of supplies.

TRAINING

The problem of recruiting and training competent people to fill all positions will be a major one. Each member of the engineering service should receive a basic course covering civil-defense organization, purpose and scope, and courses covering his particular duties as a member of the service. He will also need instruction as to where, to whom, and when to report for duty or assignment. The majority of the people, who come from the engineering construction industry, will not require instruction in their particular crafts.

Additional training will be necessary for teams which are assigned to extend mobile support to disaster areas.

RESCUE SERVICE

THE FUNCTION of the rescue service is to remove people from the debris of demolished or damaged buildings. If rescue service teams are adequately trained and provided with proper facilities, many uninjured persons or casualties trapped in buildings can be saved.

Air raid alert warnings make it possible for people to take refuge in designated locations in homes or buildings or in shelters. This is important for self-preservation prior to an attack. Immediately after an attack, the rescue service must function with speed and precision to free trapped persons from damaged structures and deliver the injured to the first-aid teams of the health service.

The morale of the population will be directly affected by the adequacy of the rescue service. People should have confidence that in the event they are trapped in damaged buildings or under debris, the rescue service will reach them, remove them, and deliver them to the medical service for attention if they require it.

In peacetime, existing services like fire, police, and the mining industry perform rescue activities in fires and other disasters including emergency rescue of trapped victims. These services or groups are, however, not equipped, trained, or manned to meet successfully the widespread problems of rescue that would be brought about in communities subjected to heavy attack.

To meet such a situation there must be both extensive organization and applied practical training in rescue. Virtually all of the protective services, like fire and police, will participate in rescue, but the basic responsibility for rescue will be assigned to the specialized rescue teams which are part of the rescue service.

All personnel engaged in the work must be highly trained and the operations competently commanded. The hazards of using unskilled rescue personnel are so great to entrapped victims and working personnel alike, that the purpose of rescue and saving lives is defeated and, instead of a reduction, an increase in victims may result. In this service there is no acceptable compromise for practical competence, which can be attained in no other way than through practical training.

Rescue personnel must perform actual acts of rescue during their training period. This can be accomplished by performing actual rescue activities in piles of building debris and in partially destroyed buildings.

Special care should be taken in organizing the rescue service to include volunteers having skills applicable to the service, such as: equipment operators, welders, cutters, riggers, carpenters, etc. Rescue team personnel should include a variety of these people having different skills so as to make the teams versatile.

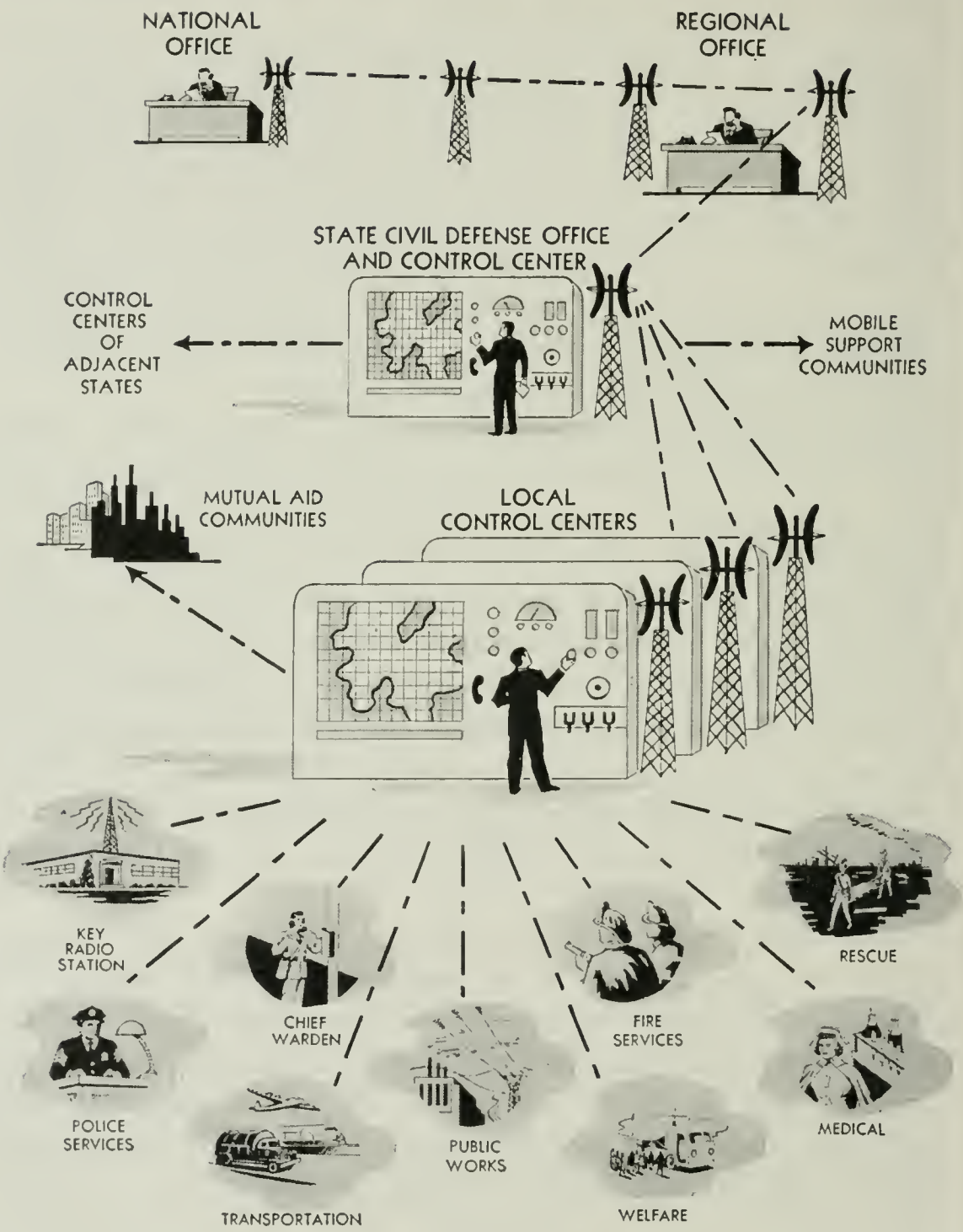
Rescue is a technique requiring judgment and skill. It cannot be specifically divided into categories such as "heavy" and "light." The leader of a rescue team must know the whole range of rescue techniques and quickly determine the method to be employed. If great volumes and weights of debris or sections of buildings must be removed, heavy equipment with skilled operators must be employed under the leadership of the rescue chief. Other situations may demand the most careful type of work, such as opening a small tunnel under a debris pile, where but one skilled man may operate at a time.

Rescue work must be coordinated with the medical service. Where many persons are injured, their release will require a high degree of first-aid knowledge by all team personnel. In some instances professional medical personnel must be present to perform or assist in the final rescue, and in most cases medical services must be available to care for trapped individuals during and immediately following rescue.

For civil defense to meet this major new service requirement, the Federal civil defense agency plans to establish and maintain practical rescue schools for developing techniques and training team leaders from State and local operating units and will advise and assist the States in the establishment of State schools for the broad extension of this training.

State civil defense directors should in turn insure that adequate attention is given locally to the organization of this service. The selection and training of leadership for rescue teams is the first step. These leaders, with guidance from detailed manuals, should work with medical, engineering and other services, arrange for transportation that will make their teams effectively mobile and extend the training that will be provided under Federal and State leadership.

COMMUNICATIONS



COMMUNICATIONS

THE NERVE SYSTEM of civil defense is communications. Effective and rapid communications must be maintained between Federal and State and between State and local civil-defense organizations and within these organizations if they are to function when needed. Even though our existing communications systems are efficient, in wartime they can be severely damaged in areas under heavy attack. Therefore, every contingency must be provided for, and sound, flexible plans developed so that in any emergency, communications in some form will be available.

In formulating communications plans each State and local civil-defense organization should take the following steps:

1. Identify the communications needs that would exist in the event of an emergency, and anticipate the volume and kind of traffic and the special problems that might arise.
2. Inventory existing communications facilities and make such arrangements as may be necessary for their emergency use in accordance with the anticipated requirements.
3. Provide in every instance secondary systems of communication in the event the primary system is made unavailable or inoperative in the emergency.

In each State area, metropolitan area, or community, communication needs will vary, depending on the degree of vulnerability, geographic location, size, and required extent of civil-defense operations.

Normally, communications requirements in critical target areas would include facilities for: communication between civil-defense control centers, air-raid warning networks, communications systems at local level for transportation, fire, police, rescue, warden, medical, and engineering services; air-ground communications systems at State control centers for use with aircraft employed in civil-defense activities; and communications at all levels to the public.

Communications plans at the local level should embrace all forms of communication including telephone, telegraph, facsimilie, AM, FM, and TV, radio, teletype, messenger service, and other emergency com-

munications means. Planning also should include provisions for radio equipment for communication between ground stations and between air and ground. All existing communications facilities and services should be used to their fullest extent, but provision must be made for emergency services as alternate means of transmitting messages when regular facilities are destroyed. Such emergency services should include mobile two-way radio equipment, amateur radio services, and any other means that could be developed.

To the extent that existing facilities have to be augmented with additional equipment and supplies, local civil-defense organizations in cooperation with the State civil-defense agency should develop an itemized list of requirements, and these requirements should be reviewed, coordinated, and consolidated by the State organization for submission to the Federal civil-defense agency, when requested.

CONTROL CENTER COMMUNICATIONS

Civil-defense control centers are essentially centers of communications for the receipt of attack warnings and other information and for the initiation, direction, and control of civil-defense operations during an emergency with due regard for requirements of military security.

The State civil-defense control centers should be located with special regard to security, the availability of communications and transportation.

Each local civil-defense control center should similarly be located with due regard to security and ready availability of all kinds of communications facilities and to local civil-defense services. Secondary communication services should likewise be available to insure communications during any emergency.

Alternate control centers should be planned for interconnection with the primary control center for operation during alert periods and in the event the primary control center should be knocked out.

Every effort should be made to keep the communications equipment of local control centers as simple as possible. However, they should be capable of maintaining communications for the following purposes:

(*a*) Receipt and dissemination of air-raid warning information.

(*b*) Operation of sirens and public-address systems to alert and convey warning to the public, industrial installations, and to civil-defense volunteer workers.

(*c*) Summoning of key civil-defense personnel for duty when needed.

(*d*) Receipt of reports and requests for assistance from the established local services and civil-defense operating units.

(*e*) Maintenance of contact with State and other control centers to facilitate exchange of assistance.

(*f*) Constant two-way communication with local police, fire, rescue, medical, engineering, and other operating services and with key radio broadcasting services.

Provision should be made in all civil-defense control centers for a force of messengers, with automobiles, motorcycles, bicycles, or other transportation.

BROADCASTING

Broadcasting stations (including television) should be utilized as an important medium to inform the public of its responsibility in civil defense.

For effective civil-defense operations, every person should know what he must do in an emergency. This will involve a major educational program and require a well-integrated system for the dissemination of information. Through broadcasting stations, timely civil-defense informational and educational material can be quickly presented to a maximum audience with a minimum number of persons required to prepare and disseminate the information. Programs can be broadcast regarding the location of shelters, advice given on how to prevent the jamming of thoroughfares, and similar educational programs carried on for the benefit of the various levels of civil-defense organizations.

AMATEUR RADIO OPERATORS

Amateur radio operators and networks will be used in civil-defense communications. They are licensed radio operators and their radiotelephone and continuous-wave equipment can be utilized as secondary services thus providing for maximum flexibility. Under an organized plan, amateur radio operators will make an important contribution to civil-defense communications.

SECURITY OF COMMUNICATIONS

Security problems will arise in the use of communication channels which may be subject to enemy interception. In this respect radio is particularly vulnerable. All plans for communication systems and procedures must take into account this security factor to avoid unnecessary disclosure of information valuable to an enemy.

ORGANIZATION

The Federal civil-defense agency is responsible for the over-all planning of communications for civil defense and for coordinating with the Department of Defense, the Federal Communications Commission, and other governmental agencies, and commercial communication and broadcasting networks. It will determine the technical specifications and advise civil-defense organizations on their communications systems.

A communications chief with the necessary staff should be established under the State civil-defense director and made responsible for the necessary surveys, planning and coordination of civil-defense communications within the State, State areas and local areas. The State communications chief should work closely with the commercial companies and with the civil-defense communications chiefs in the cities and communities within the State.

A communications chief should be a part of the local civil-defense organization. He would be responsible for preparing the local communications plan for civil defense. He should assist in determining the location of the local control center or centers, based on the availability of adequate and dependable communications facilities at the selected locations.

To assist in the proper preparation for an emergency, the communications chief at each level should make sure that responsible authorities are familiar with the plans, requirements, and specifications for communications systems and procedures.

TRANSPORTATION

TRANSPORTATION equipment and services are so widely distributed and in such constant daily use by the people that the problem of transportation in civil defense lies mainly in proper advance preparation and emergency use of the locally available transportation resources. These resources will be supplemented by mutual-aid and mobile-support arrangements when necessary.

In the event of war-caused disaster, transportation will be needed for:

1. Movement of special civil-defense teams and equipment.
2. Movement of rescue teams and equipment.
3. Movement of police.
4. Messenger service.
5. Movement of medical and health teams.
6. Transport of rescued persons.
7. Transport of the seriously injured and hospital patients.
8. Transport of evacuees.
9. Movement of food and emergency supplies, including water.
10. Movement of emergency labor parties.
11. Movement of persons or property under mutual-aid arrangements.
12. Movement of engineering and utility crews.
13. Emergency mobile transport reserve;
14. Such other special services as transportation may be called upon to perform in civil defense.

Civil-defense authorities cannot assume that adequate transportation services will be readily available for these purposes. Transportation services must be planned, organized, and in some instances trained for use in civil defense.

Due to the impact of the wartime load, transportation equipment will doubtless be in short supply. Shortages may be aggravated by vehicle destruction from enemy action, and the efficiency of remaining transportation may be impaired. The greatest possible effectiveness under disaster conditions can be achieved only by advance planning and organization, coupled with an adequate transportation control and dispatching system.

In order to prepare the required plans and carry out emergency operations, a transportation service should be organized as part of civil defense at State, area, and local levels.

ORGANIZATION AND FUNCTIONS

The chief of transportation service on the staff of the State civil defense director should assist local transportation chiefs in developing their plans and determining that the plans are adequate. He should coordinate these plans into a State-wide plan to assure that full utilization of intercity transportation services has been made and that mutual aid arrangements are satisfactory. He will organize the transportation elements of mobile support, and will coordinate transportation planning with evacuation planning at the State level.

LOCAL ORGANIZATION AND FUNCTIONS

A central transportation division should be established within the framework of the local civil defense organization, headed by a transportation service chief. This division should prepare plans to meet transportation needs, resolve conflicting demands among the various local civil defense services, and serve as liaison with local, State, and National private transportation authorities.

The local transportation division should perform several functions in the discharge of its planning responsibility. Primarily, it should receive the transportation plans of all local civil-defense services, showing their estimates of requirements for various types of transportation service, equipment, and facilities, including warehousing. In determining how to meet these needs, it should compile a readily serviceable inventory of such services, equipment, and facilities.

This inventory will cover railroads, intercity bus companies, intercity truck lines, air transport, taxicabs, local transit systems, sightseeing buses, local cartage, public rental cars and trucks, ferries and other types of watercraft, truck fleets of private companies, school buses, public and private ambulances, private automobiles, private aircraft; also movable types of construction equipment and other automotive vehicles for special purposes, on-highway and off-highway, and warehousing and storage facilities.

The transportation adviser must develop plans for adapting standard types of equipment to meet special emergency needs such as converting

trucks, buses, or station wagons to ambulances by adapters to support stretchers. The division must make mutual-aid or other arrangements for stand-by facilities outside the local area through the State or area civil defense director to cover any deficits and to provide additional mobile support. In its planning, the transportation unit must take into account, for purposes of coordination, civil defense plans for the metropolitan area of which the community is a part, plans and policies of the State transportation unit area, plans and policies established at the national level by the civil defense and war transport agencies.

EMERGENCY FACILITIES

The transportation division should sponsor the establishment of emergency storage and handling facilities for fuels and other operating supplies, including designated motor fuel service stations equipped with auxiliary pumping units for use in emergencies; it should designate and equip emergency repair stations; and it should establish temporary local priorities for use of such supplies and facilities in order to insure their use by transportation agencies performing vital disaster services.

The transportation unit should direct the preparation of plans and procedures for the emergency utilization of the facilities of all transport agencies, permitting each facility to retain its own supervision to the fullest extent possible. It should mobilize unorganized transportation equipment and personnel by assigning it to existing operating organizations and by creating new operating units to meet special needs.

The local transportation division should develop plans for the disposition and eventual use of those vehicles and operators which are not assigned special missions in the prearranged plan. In this connection, plans should be made in cooperation with the police service for "freezing" private automobiles and other highway vehicles not having assigned missions, wherever they are at the moment of an alert, or in event of an actual attack without warning. In addition, control points must be established at places outside the local area where inter-city traffic can be regulated. No more serious obstacle could occur than the slow-down or complete stoppage of emergency urban vehicle movements due to clogging of streets with private automobiles and

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unassigned vehicles. Arteries must be kept open for vehicles engaged in civil defense activities.

Points of assembly should be established on the outskirts of the local area and each vehicle operator assigned his assembly point in event of an alert. Rendezvous points should also be established on the outskirts of the local area for outside vehicles which are made available under mutual-aid or mobile-support arrangements. A central dispatching office should be set up at the local control center, and secondary dispatching control centers established as necessary. Assembly and rendezvous areas and dispatching centers should be located according to the deployment programs of the other civil defense services which will be claimants upon transportation equipment and service.

While every effort should be made to keep the relationships between the local civil-defense administration and transportation agencies on a voluntary and informal basis, regulations should be prepared governing the requisitioning of local transportation equipment and facilities not otherwise available, and to limit commandeering of vehicles and facilities to authorized persons and to cases of extreme urgency. Such regulations should be consistent with State policies in this field.

The transportation unit should coordinate its planning with other civil-defense plans for the restoration of roadways, waterways, and bridges, and for the control, coordination, and movement of traffic over such facilities, in order that adequate congestion-free arteries may be available for the emergency movement of persons and property.

TRAINING AND INFORMATION

The local civil-defense transportation unit should sponsor programs for the training of personnel required in the maintenance and operation of transportation equipment, facilities, and services related to civil defense activity. Furthermore, it should see that, through the civil defense public affairs office, the public is kept informed on phases of civil-defense transportation plans which depend for their successful operation on the understanding and cooperation of the public.

PLANT PROTECTION

FULL SCALE preparedness for defense includes the development of adequate plans for the protection of the Nation's industrial facilities. All practicable steps must be taken to reduce war hazards to industry and its personnel through a program providing adequate measures against enemy action.

The plant protection program of civil defense includes:

1. Protective systems against curtailment of production by enemy action—a well-organized system of "extended self-protection" described in chapter 13.
2. Necessary countermeasures that will restore the facilities to normal operations in a minimum of time.

RESPONSIBILITY FOR PLANT PROTECTION

Primary responsibility for plant protection rests upon the owners and operators under the principle of organized self-protection.

The security protection of Federal property is primarily the responsibility of the Federal Government. The respective State and local governments are responsible for the protection of their own municipal buildings, public utilities, and public institutions. Private managements are expected to provide the necessary protection for their properties and operations.

THE PLANT PROTECTION PROGRAM

The civil-defense plant-protection program is intended to:

1. Assist in the installation of adequate plant-protection programs in plants where none now exist.
2. Assist in the coordination of the present plant-protection activities within the plant, adding those civil-defense services not already provided.

In each plant having its own civil-defense organization, one individual should be placed in charge of protection operations. He should administer the training program, maintain liaison with civil authori-

ties, and, with such other agencies as may be necessary, perform all civil-defense planning functions.

In time of enemy attack he should assume command of civil-defense forces within the facility, supervise the operation of a control point, direct civil defense emergency operations within the facility, and coordinate the plant activities with those of the community civil-defense organization.

There should be clearly defined arrangements between each facility having its own civil-defense organization and the community civil-defense organization covering evacuation, welfare services, chemical, and radiological defense, fire services, engineering services, and rescue services.

In establishing the emergency plant-protection organization, full use should be made of the service departments within the plant. These departments should continue to function as usual, except in an emergency, at which time they should operate as a unit of the emergency plant-protection organization under the control of the plant civil-defense chief, and coordinated by him with the activities of the local civil-defense agency.

Volunteer groups recruited from within the plant organization should be organized and trained to perform those civil-defense functions not covered by existing service departments. Individuals actively engaged as key personnel in local community civil-defense activities should not be selected for civil-defense services within the plant unless such duties do not conflict as to time and availability. The details of selection should be worked out by the plant-protection chief and the local civil-defense authorities.

A plant-control point should be established as the nerve center of the plant-protection system. It should be in a protected room where the plant-protection chief and his staff of leaders and operators maintain direct communication with the nearest local civil-defense control center, receive information from the plant wardens and other leaders, and direct operations during emergencies.

Each State civil-defense organization should include a plant-protection office which will advise and assist localities in developing plant-protection programs. It should be prepared to cooperate with Federal and State internal-security agencies.

It should also enlist the assistance of other agencies, either Govern-

ment or private, to assist local plant-protection chiefs in the preparation and execution of their plans. Such assistance should be obtained from individuals who are actively engaged in fire and accident prevention fields, and who would be qualified to act as State inspection groups, when authorized.

The Federal civil-defense agency will provide guidance on plant protection standards for the use of those facilities which need special security measures and have not been assigned to specific agencies for protection purposes.

Plant protection systems generally include the following protective measures:

1. Guard systems and security fencing.
2. Safety programs.
3. Warning systems.
4. Personnel shelters for safety of personnel during alert and attack.
5. Fire-fighting personnel and equipment.
6. Emergency medical facilities.
7. Rescue teams.
8. Exit and entry control.
9. Blackout techniques if necessary.

Enforcement of security regulations should remain with established law-enforcement agencies at State and local levels.

SUPPLY SERVICE

ADEQUATE supply and equipment of the civil-defense organization should be a mutual responsibility of the Federal, State, and local governments. To this end there should be a planned system whereby supply and equipment requirements can be determined accurately and provided when and where needed.

This planning includes the development of the system, supervision of its operation, coordination with other agencies, selection of the supply items which will be needed for the various services, continuing determinations of the quantities and times when they should be furnished.

Supply planning must keep step with general organizational and operational planning for civil defense. Although in the main the responsibility for the operation of civil defense is placed in the States, supply operations must be coordinated in a plan which is national in scope.

The normal peacetime supply organizations of States, counties, and cities should be able to absorb most of the additional burden of procurement, storage, and distribution of supplies required for civil defense. However, the supply services must be recognized as part of the civil-defense organization as a whole. Civil-defense authorities should study existing supply organizations to determine what changes may be necessary or desirable to carry out this new function.

DETERMINATION OF REQUIREMENTS

In order to formulate policies and establish an appropriate system of supply for civil defense, continuing estimates should be made of the quantities of supplies and equipment which the civil-defense program will require. In computing these estimates, the inventory of existing equipment of States and communities under the mutual aid and State mobile support patterns must be considered before arriving at requirements for new supply. With total State requirements thus determined, the Federal Government can make appropriate allocations of national

resources to civil-defense needs. State and local civil-defense planners should assist in the determination of national requirements. Determination of requirements is a logical step which must be taken by all authorities at some time during the course of State and local planning, and a uniform approach to the problem will be of mutual benefit.

A requirements manual will be issued containing lists of equipment appropriate to the different services, together with brief specifications, describing each item and referring to the appropriate Federal or other standard specifications. It will include data on maintenance, repair and operational equipment, and supplies. It will set forth criteria for estimating requirements, rates of replacement and expenditure, stockpile considerations, and other factors which will assist in estimating and developing the requirement program. Standard forms to be used in reporting eqiupment needs will be presented so that an orderly compilation of national requirements can be made in the Federal civil-defense agency.

The requirements manual will be in loose-leaf form, kept up to date through necessary amendments, including those suggested by State and local officials. As a standardized system, it will promote uniformity in all considerations of procurement, storage, and distribution of civil-defense supplies and equipment through concise identification of items. Control of quality will be strengthened and questions of replacement and interchangeability simplified.

PROCUREMENT

Procurement of civil-defense supplies should be divided among Federal, State, and local civil-defense organizations. The State and local organizations should procure those items for which each is responsible according to their State civil-defense plan, and the State should be organized also to receive federally procured items and to distribute them to local organizations as needed. In accordance with the policies outlined in chapter 7, civil-defense supplies procured at Federal expense will be of two kinds:

(*a*) Supplies not normally stored in peacetime, and peculiar to civil defense, which must be furnished to and through States to localities, for use in developing and organizing their civil defense systems.

(*b*) Supplies which would be used by the Federal Government to replace supplies and equipment destroyed or worn out in emergency civil-defense operations, and for giving relief at the time of a disaster.

With reference to State and local procurement, Federal authorizations to purchase may become very important if materials or items of equipment are scarce. In such cases the Federal civil defense agency should be called upon to determine essential priority requirements and to assist in securing the necessary authorization.

STORAGE AND DISTRIBUTION

Storage warehouses should be located at dispersal points which insure the availability of civil-defense supplies in time of emergency.

For storage of items purchased by the Federal Government for use at the time of disaster, non-Federal warehouses selected at strategic locations will normally be used. In the distribution of items, existing non-Federal facilities also will be used whenever possible. Distribution of these supplies during a disaster normally will be made upon direct request from the State civil-defense director in the area where the disaster has occurred. Such a request should be directed to the regional civil-defense director.

ACCOUNTING

In order that expenditures of Federal funds be justified, distribution of any federally procured supplies must be in accordance with accounting procedures which the Federal civil defense agency will prescribe.

The major portion of any supplies procured by the Federal Government for civil defense would be shipped to specified localities within a State for redistribution. Supplies furnished during a disaster would be shipped upon approval of a request of the State director. The State director of civil defense should designate a responsible official in the supply organization as property officer, who will be bonded and charged with any Federal civil defense property shipped to any point within his State. He should handle the details of emergency issuance of supplies and maintain records of all property.

The local civil defense director likewise should designate a responsible property officer, who will handle the administrative details in

connection with municipal civil defense supplies and maintain proper records of such property.

PLANNING

Well-qualified individuals in the various State and local organizations should be held continuously responsible for analyzing studies of inventory, requirements determination, and supply systems.

CIVILIAN AUXILIARIES TO MILITARY ACTIVITIES

THE DEVELOPMENTS and characteristics of a war produce many operational functions and tasks which, if performed by the uniformed military services, would quickly exhaust the manpower supply. Many of these functions can be performed by using a reasonable portion of the spare-time hours of civilians primarily engaged in other activities. The careful use of part-time civilian help in this manner can achieve the manning of many essential activities without depleting the general manpower pool of the Nation.

In order to integrate the selection and assignment of personnel, maintain their adequate strength by replacement when necessary and accomplish other details of their administration, the civil defense officials of State and local governments are responsible for recruiting, organizing, and administering civilian auxiliaries for such functions. In each case the requirements for such auxiliaries will be established by the service (Army, Navy, or Air Force) requiring the assistance. That service will be responsible for directing the operations.

A typical civilian auxiliary organization is the aircraft observer system which operates under the direction of the Continental Air Defense Command of the Department of the Air Force. Similarly, auxiliaries may be required for surveillance of our extensive coast line to detect and report landings of small enemy sabotage or espionage groups, or for other patrols that would relieve military forces from the commitment of manpower needed for military duty.

The Civil Air Patrol began during World War II under the circumstances and principles outlined above and successfully fulfilled missions of search, observation, and rescue over both sea and land. The Civil Air Patrol, originally organized to serve the Armed Forces as an auxiliary force, has expanded to a point where it can be used in civil defense operations.

The personnel of military auxiliary units should be individuals not engaged in other essential work that would remove them from their home community. Their active participation in auxiliary programs should exempt them from enrollment in other key civil-defense activities.

PERSONNEL SERVICE

THE DEMANDS on the Nation's manpower resources in a national emergency are so great that every effort must be made to utilize volunteers to staff civil defense.

A national civil-defense program will not need a large proportion of persons for full-time employment.

There are four types of civil-defense workers:

1. Those who perform their normal duties in public or private services, such as policemen, firemen, public works, or utility workers, with additional duties that wartime disaster imposes.
2. Volunteer part-time workers who give their time to civil defense activities in addition to their normal work.
3. Volunteer full-time workers.
4. Part-time or full-time paid workers.

The importance of securing qualified leadership for the civil-defense organization must be stressed. One of the first steps is to determine the framework of organization that will best fit the needs of the particular State and city. Thereafter, a determination should be made as to what leaders are needed for the headquarters staff and for the separate services.

Many individuals may be found in existing State and local governmental departments who are capable and available to assume the additional duties that civil defense may require. Professional, industrial, and utility organizations have experts who can assume leadership in the fields with which they are most concerned. The services of public-spirited citizens with executive experience should be secured. Once secured, whatever their previous knowledge and experience, these persons must be trained in the techniques of civil defense.

At the same time that the headquarters staff and the leaders of these separate services are being selected and trained, decisions should be made as to the types and numbers of people needed to form a nucleus for the headquarters staff and, after preliminary planning, the numbers and different types of volunteers needed for each of the civil defense services. When the skeleton organization has been selected and

trained, and when training materials and personnel are available, the full complement of the volunteer personnel for the entire civil defense organization should be recruited and trained.

Certain basic considerations are necessary before the latter step is taken. Obviously, it will be logical to recruit civil defense workers primarily from among persons outside the military service. In addition to the middle-aged and older population, younger people, several years short of possible military service, can be of use in civil defense functions not requiring extensive training. Women can and should be used to the utmost. Experience in the United States and abroad during World War II revealed the great potentiality of women for many types of civil defense work.

Most volunteers cannot work full time. This means that a large numerical strength is required to permit rotation of personnel for part-time duty. It must be remembered that a volunteer's assignment in civil defense may have to give way to other responsibilities which will at times prevent or interrupt his volunteer service.

Proper use of civil defense workers will require careful planning. It calls for making full use of each individual's experience and the proper assessment of his value to civil defense so that he may do the best job in an emergency.

The essential steps in achieving fullest use of civil defense workers are the following: (1) Analyze the requirements for each civil defense job, (2) determine the personal qualifications necessary for the job, (3) place the worker in a job fitting his wishes and qualifications, and (4) improve the worker by schooling and training.

The Federal civil defense agency has the responsibility for determining over-all policies and developing procedures for the recruitment of personnel, and will furnish States and local authorities with results of studies in these areas.

VOLUNTEER RECRUITMENT

In order to take care of the recruitment and assignment of the large numbers of people who will volunteer for civil defense duty, the local civil defense authorities, assisted by the State authorities, should set up a volunteer office. The volunteer office should serve as the registration center for all civil defense services which need volunteer workers. It should be responsible for recruitment of the volunteer, recording

such data as age, sex, abilities, education, occupational history, etc., and on completion of his basic training courses in civil defense, arrange for his assignment to a service where the greatest use may be made of his abilities and skills, giving every consideration to his personal wishes.

The volunteer office should enroll all eligible men and women in the United States Civil Defense Corps who may volunteer their services, thereby constituting a pool of manpower from which, according to their emergency needs, the various services may draw.

A very important function of the volunteer office is the keeping of service records and roster of all civil defense workers. A personnel records division within the office should be responsible for the general supervision of all personnel records and cards for the various civil defense services, including the records of hours worked by volunteers, completion of training courses, awards of certificates, and issuing special awards.

The volunteer office should have the responsibility for the compilation of data and sending of such reports as may be required by the State and Federal civil defense agency.

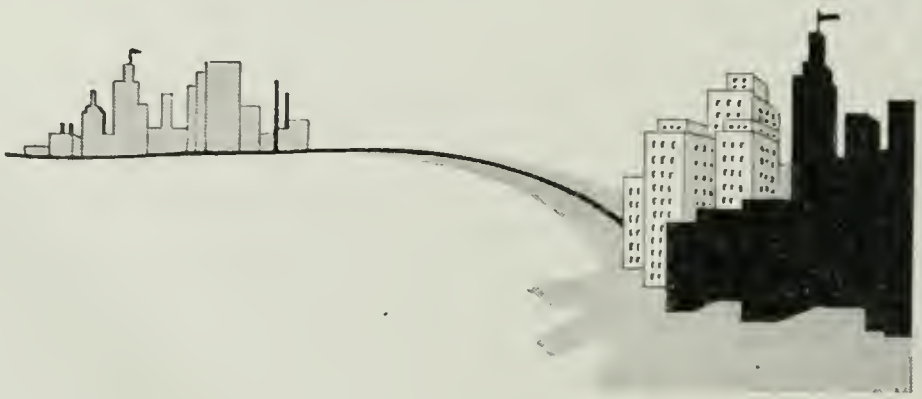
Part III

PLANNING STEPS

1. ESTABLISHMENT OF CIVIL DEFENSE COUNCIL
2. APPOINTMENT OF DIRECTOR
3. STUDY AND INDOCTRINATION
4. MEETING OF COUNCIL
   a. Establishment of objectives and key decision.
   b. Determination of problems arising as a result of enemy attack.
   c. Specification as to the form of the draft plan desired.
   d. Development of planning assumptions.

5. PREPARATION AND RELEASE OF INSTRUCTIONS TO MEMBERS
   a. Announcements of all decisions and objectives.
   b. Announcement of council membership including major subdivision and subcommittee chairmen.
6. MAINTENANCE OF CHECK LISTS OF CIVIL DEFENSE PLANNING TASKS
7. PRESENTATION OF FIRST DRAFT PLANS
8. COORDINATION PERIOD
9. ASSUMPTION OF A HYPOTHETICAL ATTACK

10. A TEST EXERCISE FOR ALL COUNCIL MEMBERS INCLUDING REPRESENTATIVES OF NEIGHBORING COMMUNITIES, STATES, ETC.
11. FORMULATION AND COORDINATION OF AREA PLANS



INITIAL STEPS IN CIVIL DEFENSE PLANNING

INTRODUCTION

IN TRANSLATING civil-defense policy into operation, the first step is to plan practical methods for using existing public and private resources to best advantage. Such planning will provide the necessary foundation for a realistic full-fledged defense organization.

The plan should indicate, in broad terms, what is to be done and by whom. It should consist of directives, standing operating procedures, and policies designed to coordinate the various States, cities, communities, and private institutions which have civil-defense responsibilities. Such a plan should result in first establishing responsibilities, then assigning them to officials, departments, and agencies. It should list existing resources—personnel, supplies, equipment—and also requirements for additional resources which are not now available, but which will be necessary in the event of attack.

Deficiencies thus identified will reveal the resources to be obtained through mutual aid, mobile support, and ultimately additional procurement. Emphasis should be placed at the outset upon the organization and use of existing resources, private as well as public.

A state of civil-defense readiness will not exist until (1) deficiencies in resources have been filled, (2) a force of volunteer civil defense workers is trained and equipped, and (3) the public understands what to do in the event of an attack.

An initial plan for doing what is possible with what a community has or can readily obtain, however, is important to secure maximum protection until a complete state of readiness can be realized. From it will evolve State, area, and local plans which will lead to the civil-defense organization needed for national security.

In applying the patterns outlined in parts I and II to the specific local requirements, there must be taken into account differences in geography, in forms of State and municipal governments, in population

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densities, means of transportation, and locations of the designated critical target areas.

The question, "How do we start civil-defense planning?" is answered in the following sections. Tested guides are provided for the translation of policy into operation. The practical usefulness of the material presented in this chapter has been tested in a series of exercises conducted in the cities of Washington, D. C., Seattle, Wash., and Chicago, Ill. By describing the chronological steps to be taken in drawing up their plan, a check list is furnished for those States and cities engaged in drafting a civil-defense plan.

The planning steps outlined in the succeeding pages are designed to cover the requirements of critical target areas. They may be suitably modified to meet the conditions of less critical areas. States and cities which are less liable to attack than others are nevertheless not immune to such attack. In any event, they will be called upon to provide support for more critical areas and to provide for evacuees from such areas.

PLANNING PROJECT

The civil-defense director of each State should arrange for one of its designated critical target areas or one of its larger cities and its surrounding urban communities to undertake a civil-defense plan, as a step in the development of the programs of the State and its other municipalities.

After the city drafts and coordinates such a plan, it should be presented to conference meetings of State and local officials. Representatives of the Federal civil-defense agency would attend, if desired, and their comments and advice would be made available to the States and cities.

Representatives of other States and municipalities may be asked to participate in the meetings as observers. These observers then return home with an improved understanding of the problems involved, and of how best to apply in their city the experience made available to them. In this way such a program aids the progressive development of municipal, State, and Federal civil-defense planning in general, as well as that of the city whose plans are under discussion.

Following the meeting, the city in question coordinates its plan with neighboring communities. Mutual aid and mobile support plans are then considered in more detail, and a metropolitan area plan is drawn

up and coordinated with the State's plan. Meanwhile, the State stimulates other cities to develop their own plans.

The principal values of this approach may be summarized as follows:

1. It puts the city in a state of readiness because predetermined courses of action result—that is, standard operating procedures, and appropriate directives for full and effective utilization of their existing resources.

2. It encourages the use of outside resources to fill deficiencies.

3. It stimulates other cities through their observers to make similar efforts.

4. It informs Federal, State, and local officials of the solutions suggested, the problems raised, and deficiencies indicated by the test method, thus advancing long-range State and local programs on a Nation-wide basis.

There follow certain recommendations and suggestions for carrying out such projects. These recommendations and suggestions have been derived in large part from the experience of the three "pilot" cities in the execution of such projects.

EXECUTION OF PROJECT—SUGGESTED PLANNING STEPS

Suggested steps for the development of a planning project are summarized in this section and analyzed in more detail in the remaining sections. It is recognized that in certain communities some of these steps already have been taken. In such cases, it is recommended that State and local authorities review the work which has been accomplished and plan their future work programs in the light of the procedures recommended in this section.

1. *Study of existing information.*—In order to execute the project, the participants must have a working knowledge of the problems of civil defense. They should keep informed on current reading materials in the field of civil defense. Bibliographies are available through the Federal civil defense agency.

2. *Organization of the civil-defense agency.*—The first step is for the State to make certain that the pilot city's civil defense agency is properly established and staffed, as outlined in the preceding chapters of this plan. If, because of the absence of enabling legislation or for other reasons, a permanent agency cannot be established, a temporary or-

ganization, including a project director and an advisory civil defense council, may be organized. It should be set up in a pattern which can develop naturally into the permanent organization, with the same range of governmental and private participation.

In order to utilize all local resources, it is necessary to enlist the aid of appropriate municipal officials and selected private agencies and citizens for the planning phases, and to appoint them as members of the council.

The membership of the council should consist of representatives of the interested and affected local agencies, including the appropriate city departments, public and private utilities, information media, and members of such private organizations as medical societies, engineering societies, welfare organizations, Red Cross, civic associations, and transportation and similar services.

The director, with a small staff, should function on a full-time basis at least during the preparation of the first plans. The director should function as a planning adviser to the mayor or city manager without directive authority over any of the operating departments, unless enabling legislation has already given him this authority.

3. *Meeting of the council.*—At the first meeting of the civil defense council at which the project is considered there should be explained to the individuals present:

(*a*) The purpose of the meeting.

(*b*) The nature of the problems.

(*c*) The planning steps which the council will take.

The stages normally followed in executing the project are:

STAGE I—FIRST DRAFT OF THE PLANS

Preparation of draft plans, very general and very brief, embodying what each service would do with the resources available.

STAGE II—COORDINATION OF FIRST DRAFT PLANS

Coordination of the draft plan of each service or section with other services or sections to the extent that such coordination is necessary because of overlapping interests; and revising or modifying the first draft as required by the coordination process.

STAGE III—HYPOTHETICAL ATTACK PROBLEM

The posing of a hypothetical attack problem by which the draft plans evolved thus far may be tested by assumed conditions.

STAGE IV—TEST EXERCISE

Conduct a series of open discussions, or an exercise, to test and clarify the plans developed thus far.

STAGE V—DEVELOPMENT OF DETAILED METROPOLITAN AREA PLAN

Coordination of the civil-defense plan of the city with those of neighboring communities in order to develop metropolitan area plans. The following sections set forth more information on the details of the five stages to be considered in the planning project.

FIRST DRAFT OF THE PRELIMINARY PLAN—STAGE I

After an introductory explanation to the council of the five stages outlined above, the council should be instructed to concern itself initially only with stage I. The opening presentation should help the council visualize what happens when a city is attacked, especially what might happen in the event of an atomic attack.

1. *Policies.*—Certain decisions should be announced at this stage concerning policy questions, such as traffic control, priorities for limiting services in event utilities are damaged, and the like. It is recommended that priority be given to planning the utilization of the current resources of the city, both public and private, but that attention be devoted at this stage to what resources can be made available to critical services under mutual aid arrangements with neighboring cities. Another vital consideration is mobile support that can be expected under State leadership or direction.

Mutual aid arrangements with neighboring cities at this stage may have to be tentative or exploratory, pending legislation authorizing definitive agreements. It is suggested that, as a rough rule of thumb, cities within a 20-mile radius of a probable target city be asked to consider mutual aid arrangements for committing up to one-third of their resources as initial reinforcements by prearranged plan in the event of attack. Such arrangements will later need to be worked out more exactly and integrated into a State mobile support plan.

2. *Assumptions.*—At this point, it will be necessary to make a number of basic assumptions. These assumptions will be somewhat different in each locality because of variations in the current state of readiness, in geographical factors, proximity to other critical target or supporting population areas, etc.

Assumptions will be needed at this stage as to the nature of the attack for which measures are being planned. The possibility of other than atomic bomb attacks should be recognized, but at the outset priority should be given to measures for coping with atomic weapons. Enemy use of sabotage might affect operational control over civil defense activities and might impair the availability and use of materials and equipment. However, in accordance with the principal of "first things first", these problems in most cases should be deferred to a later date, after a plan to handle the effects of an atomic bombing has been worked out.

Assumed time phases should also be defined, such as:

(*a*) The presence of a declared state of emergency.

(*b*) A pre-alert phase, but with a strong possibility of attack.

(*c*) From time of alert to time of attack.

(*d*) Immediately following the attack.

Different types of civil defense activity will take place during each phase. For example, during phases (*a*) and (*b*), organization and training will be expedited. During an alert period, certain other specific readiness measures are needed, such as dispersal of certain parts of the services (fire, medical, rescue, and the like), and after the attack there will be the execution of the various activities required such as fire-fighting, law enforcement, rescue, care of casualties, and the move-up of supporting units.

3. *Organization and procedure for the project.*—For the purpose of the planning project, the council should be divided into subdivisions incorporating the various civil defense services. A chief or chairman for each subdivision should be appointed, with an advisory committee where necessary. Here again any temporary group should be organized in accordance with the permanent pattern.

Decisions and assumptions should be communicated to all council members in written form. If at all feasible, minutes of meetings should be kept and distributed to all council members, and to all others observing the planning process. Soon after the first meeting, the council members should receive a written statement:

(*a*) Briefly outlining what has been discussed.

(*b*) Showing the form and date when the first draft plans are required.

(*c*) Containing all assumptions and key decisions made thus far.

(*d*) Including the roster of all council members, their addresses and organizational affiliation, in order that lateral coordination and cooperation may be facilitated.

4. *Service planning.*—The chief or chairman of each service or subdivision should organize the participating personnel in his field into subcommittees or working groups. Preliminary to reaching decisions embodied in the plans, inventories of available resources should be made. The first draft plans will proceed on the basis of individual preparation and submission of the plans by subject, service, or activity. No initial attempt should be made at this stage to solve in detail and with finality all the problems that arise. Full cognizance, however, should be taken of all problems presented, the degree of solution depending on time and experience.

5. *Form of plans.*—The first draft plans should be limited to simple operational plans, standing operating procedures, supplements to departmental manuals, and expressions of local policy, all indicating what is to be done, and by whom.

6. *Recommended practices.*—The council should be advised as to practices to follow and things to look for—for example:

(*a*) Give careful consideration to adequate communications and command and control arrangements.

(*b*) Use a standard-scale map for all services to simplify future coordination and discussions.

(*c*) Obtain necessary data, such as:

(1) Size and distribution of population at various times of the day.

(2) Capacity, bottlenecks, and vulnerable points in works, highways and utilities.

(3) Resources, both present and potential, of the various city departments and also of private organizations in terms of men, equipment, and supplies.

(4) Weapons effects.

(5) Traffic engineering and control data.

Stage I for action of the council ends after each service has made its first draft plan.

In summation, the tasks of the council during stage I are:

(*a*) Indoctrination—obtaining an understanding of the problems to be met.

(*b*) An inventory or survey of the resources available to the city.

(*c*) In the light of the policy decisions and assumptions, decisions as to how to use those resources for civil-defense purposes.

COORDINATION OF FIRST DRAFT PLANS—STAGE II

While informal lateral consultation will go on during stage I, detailed coordination of the various plans is essential in stage II.

Meetings of the various sections followed by a meeting of the full council is desirable at this stage. At these meetings the general problems of coordination should be discussed, and any new assumptions or decisions announced.

At stage II of council action, a further letter of instruction should go to all services again establishing a deadline for coordination.

HYPOTHETICAL ATTACK PROBLEM—STAGE III

Following coordination of the plan between the services, a hypothetical attack problem should be presented to the planners, more detailed than that included in the annex. It is emphasized that the hypothetical attack problem should be given only after stage II is completed. If the hypothetical attack is outlined at the outset, there will be a tendency to temper the plans to fit only the given situation.

The Federal civil-defense agency in collaboration with State authorities will advise and assist in preparation of hypothetical attack problems for key cities. In any event, the council should not prepare its own problem.

All subcommittees, working groups, and individual planners should be asked to test the details of their plans drawn thus far, in accordance with the conditions stated in the attack hypothesis, so that each segment of the plan can be modified as needed in the light of the test problem. Little time need be allowed for this modification. All redrafts of plans should be prepared in final form for presentation at the subsequent test exercise.

The hypothetical attack should be realistic in order to bring out planning requirements in all segments of civil-defense operations. The planners should accept the assumed effects, and analyze their needs accordingly.

TEST EXERCISE—STAGE IV

Following the completion of stage III, a general conference should take place as a test exercise in which the participants may discuss and criticize the planning action taken thus far.

The test exercise should be attended by all committee or council members and department heads, observers from adjacent communities, and representatives of the State, in order that area coordination may proceed logically after the exercise. Whenever possible, representatives of the Federal Government should participate.

DEVELOPMENT OF METROPOLITAN AREA PLAN—STAGE V

The next step is to move from the plans of the city to the plans for the metropolitan area. For purposes of this chapter, it is anticipated that the "first draft" of a civil-defense plan will be worked out primarily in terms of the city proper. The completion of stage IV should define the requirements for additional facilities and manpower by use of mutual aid and mobile support programs. The observers from adjacent communities and representatives of the State should then proceed with their planning steps to determine mutual aid or mobile support requirements to meet the emergency needs of the city.

THE END RESULT

The end result of these planning steps should be:

1. The initial organization of all services and facilities in the area to be used as civil-defense forces in the event of enemy attack before final plans are perfected.

2. Agreement upon command, control, communications, and administrative procedures, with provision for continuous and progressive revision to meet developments of an expanding organization. These procedures will be subject to periodical revision, but nevertheless should be established as standard operating procedures which would govern if any emergency should occur.

3. Determination of what mutual aid and mobile support will be needed.

4. Estimates of the materials, equipment, and manpower which will be required by each civil-defense service available to the city.

5. Clarification of legal, financial, supply, and administrative requirements for improving the local civil-defense program, which will be required before the city takes the next steps toward realizing its ultimate civil-defense organization.

6. Identification of the unsolved problems and policy questions which must be handled by the city itself or in consultation with State, regional, or Federal authorities.

HYPOTHETICAL ATTACK NARRATIVE: CITY X

1. Between 3 a. m. and 6 a. m. on August 10 the governor of the State received and personally transmitted to the mayor of city X information that chief coastal cities on the other side of the Nation had been attacked with underwater atomic bombs. The same information was carried by press and radio before 6 a. m.

At 6: 16 a. m., the governor telephoned the mayor that he had just received information from intelligence authorities that all important industrial centers could expect attack momentarily by airborne atomic bombs.

Radio stations in all port cities officially announced, prior to 6: 20 a. m. that: In the event of atomic explosions, all persons would be safer if they remained indoors, preferably in their basements, that they should not leave their homes unless officially advised, that those caught out of doors should seek closed shelter.

2. On August 10, 195—, the weather in city X was typical for that time of year with only a few scattered fair-weather clouds. The official forecast was for a fair, clear day, unlimited ceiling, and a 5- to 7-mile per hour wind.

3. At 6:50 a. m. there was an underwater atomic explosion (hypothetical bomb No. 1) in about 95 feet of water in city X's main port area.

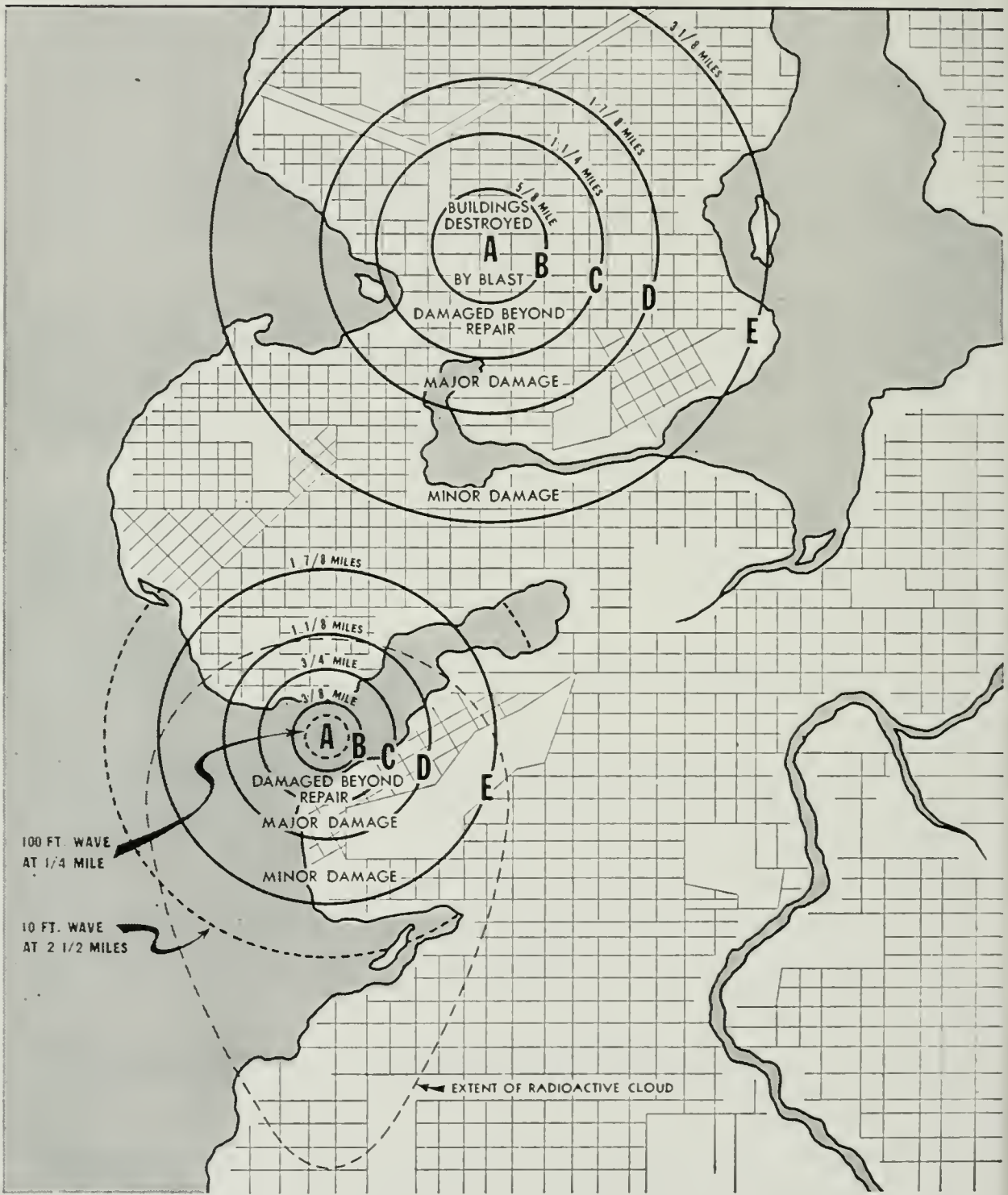
At 2:05 p. m. the mayor of city X received an official air-raid alert. Information accompanying the alert indicated that enemy planes were being tracked in the general direction of city X and that the Armed Forces were taking appropriate defense actions.

At 3:09 p. m. there was an atomic air burst (hypothetical bomb No. 2) about 2,400 feet in the air approximately 1,500 yards north of the geographical center of the city.

BOMB NO. 1—NOTES ON EFFECTS OF THE UNDERWATER BURST

The air blast from the underwater burst did only minor damage on shore. There was some damage to buildings in the immediate area, and windows were broken for a considerably greater distance.

HYPOTHETICAL ATTACK
CITY "X"



Statistics indicated a normal population of approximately 48,000 persons within about 2 miles of the burst.

Injuries to persons from the air shock were negligible as compared with such injuries from an air burst or with other effects of the underwater burst.

There were no flash burns or flash fires.

Waves from the burst, and particularly the first wave, hit the shore and severely damaged docks and ships along the water front. Several ships in the harbor capsized and sank.

A "base surge," or "lethal" cloud, of radioactive mist swept inland, fatally injuring all exposed persons, driving through broken windows and contaminating a large area. This area extended about 1,800 yards up-wind, 2 miles cross-wind on each side, and 2 to 5 miles down-wind.

Persons on ships in the harbor were killed or fatally affected. Ships not sunk were badly contaminated.

Estimates of casualties were based primarily on exposure of persons to the lethal cloud, or to the effect of contamination. Persons not killed outright, but with fatal radiation injuries, did not die at once. But those exposed to median lethal or greater radiation were disabled within a few hours.

The limit of median lethal dosage, in spite of the wider decontamination spread, was 2⅓ miles down-wind. Because the population was indoors as a result of warning, casualties were reduced. The following are estimates:

Persons receiving lethal dosages	6,600
Persons injured and seriously disabled	5,400
Persons injured, some disability, hospitalization required	1,800
Persons injured, no disability, no special treatment required	15,400
Persons having possible blood changes, no serious injury	15,750

As a radiological safety measure, evacuation of persons from dangerously radioactive areas was indicated. Areas and time factors were determined by the radiological monitoring teams.

BOMB NO. 2—NOTES ON THE EFFECTS OF THE AIR BURST

Around ground zero of the air burst, distances, damages, and population estimates are as follows:

Distances from ground zero	Damage to ordinary buildings	Normal population
0 to 5/8 mile	Buildings destroyed	3, 500
5/8 to 1 1/4 miles	Damaged beyond repair	28, 400
1 1/4 to 1 7/8 miles	Major damage	44, 800
1 7/8 to 3 1/8 miles	Minor damage	94, 200

In the minor damage area, most injuries to personnel were of a superficial nature. Most window glass in the area was broken. Injuries and deaths were confined generally to within the 1 7/8-mile radius where there were normally about 66,700 persons. Of this number, between 60 and 75 percent were casualties with about an even division between dead and injured. Casualty estimates by the three main types requiring different medical treatments were:

Mechanical injury cases	14, 000–17, 000
Burn cases (of all kinds)	7, 000– 8, 000
Radiation sickness cases	1, 000– 1, 300

(As the same person may have had more than one type of injury, these cases total more than the number of injured persons.)

Flash fires started out as far as a mile from ground zero, tending to join and involve greater areas.

DAMAGE TO FACILITIES

(*a*) *Transit.*—In the area flooded by the underwater burst, both busses and trolleys were stalled. Trolley substations were flooded. Because of radioactivity, it was not practicable to assign transit personnel to equipment in this area, even though it might be movable.

Within the damage radius of the air burst were two trolley substations, both of which were knocked out. In the major damage area, all transit facilities were damaged beyond repair. Operation of transit facilities in the minor damage area was not practicable for some time because of rubble clogging the streets.

Although bridges were not seriously damaged except for one close to the underwater burst and one wooden overpass in the heavy-damage area of the air burst, all bridges within the damage radius of the air burst were blocked by rubble.

Ferries close to the underwater burst were destroyed or badly damaged. Others a little distance away, or those protected by location, were operative.

Railroads sustained only moderate damage except for spur tracks, some of which were clogged by rubble and damaged rolling stock.

(*b*) *Communications, fire and police.*—Radio stations on the edge of the city, inland from the bursts, were not damaged. All facilities within the heavy damage radius of the air bursts were destroyed. A transmitter near the water front was contaminated, but was put into use after the radioactivity had decayed to a safe point.

Three telephone exchanges suffered major damages. One exchange was contaminated.

Although fire equipment was dispersed, with the resultant loss of only a few pieces of equipment, there were some fire fighter casualties. Stations within the range of both bombs were either damaged or contaminated.

Police personnel suffered casualties in about the same percentage as other persons. Police mobile equipment within the burst areas was either damaged or contaminated. However, prior dispersion saved much of the rolling stock. The police transmitter was destroyed. (Two taxi radio transmitters were not damaged.)

(*c*) *Utilities.*—Principal damage to electric utilities by the underwater burst was due to flooding of facilities. Substations continued to receive normal current supplies. Underground distribution systems were flooded near the underwater burst, but except for certain feeder lines, service continued.

The air burst destroyed, either by blast or fire, all overhead distribution systems in the main damage area.

A main substation above ground near point zero was wiped out.

Gas mains and services within a mile of the underwater burst were washed out. Gas mains directly under the air burst and those crossing bridges near ground zero were destroyed. Breakage of service connections in the area caused considerable loss of pressure, and some local fires.

Water standpipes within the heavy-damage radii of both bombs were destroyed or damaged beyond use. A pumping station was washed out by the underwater burst. A second pumping station was contaminated by radioactivity. A small reservoir downwind from the underwater burst was contaminated. Three pumping stations were within the flash-fire damage area. Other stations within the heavy area of the air burst were inoperative. Broken connections caused a sharp drop in pressure in undamaged areas.

(*d*) *Medical facilities.*—Hospitals, clinics, and other facilities suffered damage in the same ratio as other buildings. Medical personnel also were casualties in the same percentage as other persons.

ADDITIONAL NOTES

Since the City X civil defense public information and education program had been in progress for some time, there was no panic, although there were individual cases of hysteria.

There was, however, a considerable rush on supplies, including gas and oil, food, clothing, and other commodities.

Orderly evacuation of the contaminated area was hampered somewhat by the need for bringing in mutual aid from nearby communities over a limited number of roads and bridges.

The fire departments were faced, in addition to flash fires, with an oil fire that spread over the surface of the harbor after an oil storage depot was badly damaged by the tidal wave.

Appendix

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EXHIBIT A

SUGGESTED MODEL

STATE ORGANIZATION OF CIVIL DEFENSE

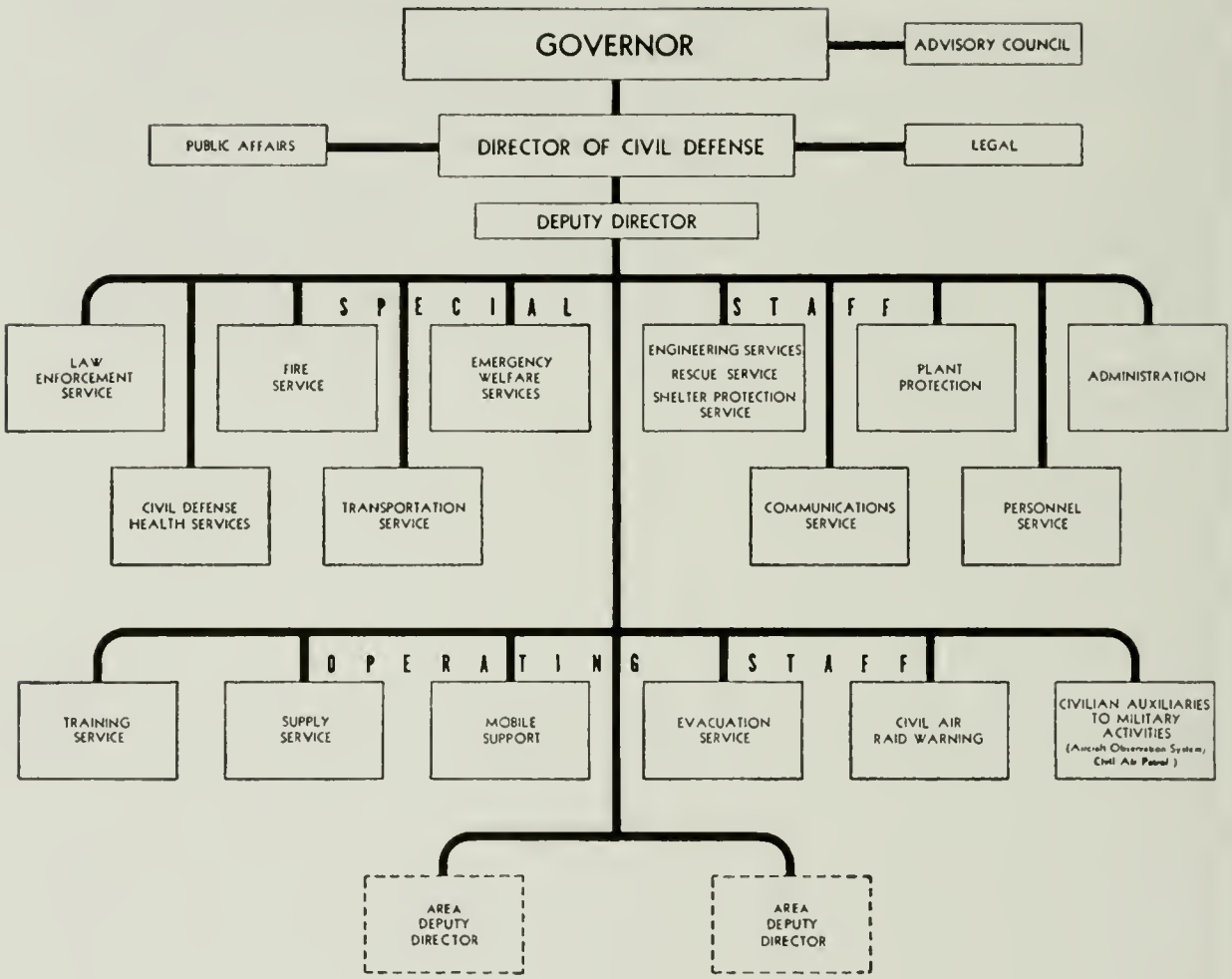

EXHIBIT B

SUGGESTED MODEL

LOCAL ORGANIZATION OF CIVIL DEFENSE

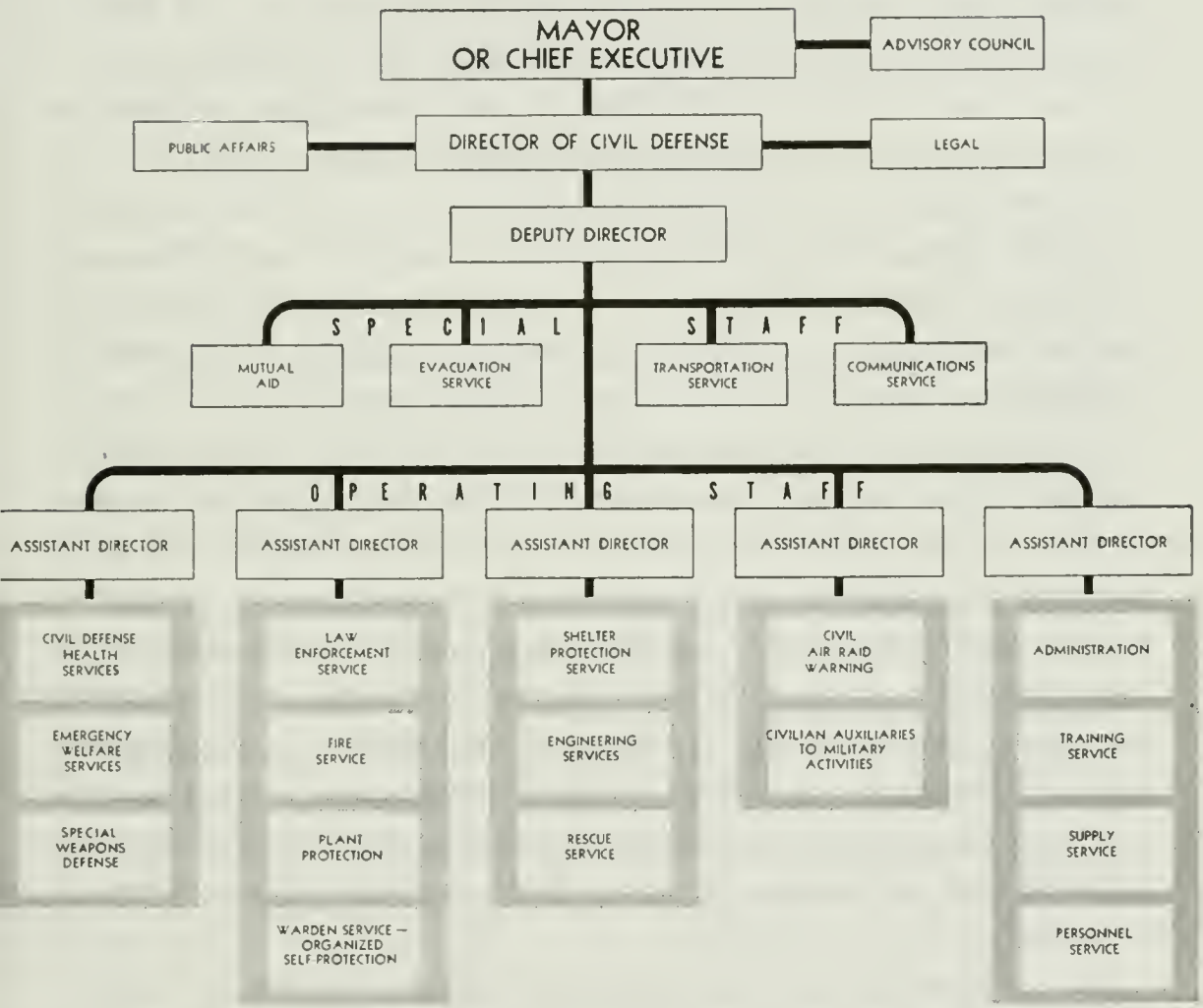

EXHIBIT C

A BILL To authorize a Federal Civil Defense program and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That it is the policy and intent of Congress to plan and provide for the protection of life and property in the United States from enemy attacks of any nature including sabotage and subversive acts and direct attacks by bombs, shell fire, and atomic, radiological, chemical, bacteriological, and biological means and other similar weapons or processes. To aid in obtaining such protection, the Congress desires that the civil defense of the United States be organized through the establishment of a Federal Civil Defense Administration with power and authority to plan, review and coordinate the civil-defense activities of the Federal Government and to coordinate the same with the civil-defense activities of the States, Territories, and possessions of the United States and the political subdivisions thereof, and neighboring countries and their political subdivisions; to develop a coordinated program of research in civil-defense methods of meeting such enemy attacks and to disseminate information concerning such methods; to develop and coordinate a program for training specialists and others to prepare for or meet enemy attacks; to obtain and distribute supplies and facilities or make financial contributions to prepare for or to meet enemy attacks; to assist in negotiating State mutual aid agreements or compacts; and to take emergency action in the event of enemy attacks. It is recognized that the organization and operation of civil defense is the responsibility of the States and their political subdivisions, except for the coordination, guidance and necessary assistance from the Federal Government and the operations of the Federal Civil Defense Administration as set forth in this Act.

SEC. 2. There is hereby established a Federal Civil Defense Administration hereinafter referred to as the Administration at the head of which shall be a Federal Civil Defense Administrator appointed by the President, by and with the advice and consent of the Senate. The Federal Civil Defense Administrator, hereinafter referred to as the Administrator, shall receive compensation at the rate of $17,500 per year, and may appoint a Deputy Administrator who shall receive compensation at the rate of $16,000 per year and two Assistant Administrators at the rate of $15,000 per year.. The Administrator shall per-

form his functions subject to the direction and control of the President.

SEC. 3. The Administrator is authorized and directed, in order to carry out the above-mentioned purposes to:

(a) Continue the preparation of comprehensive national plans and programs for the civil defense of the United States as initiated by the National Security Resources Board, and to sponsor and direct such plans and programs;

(b) Review the civil-defense activities of the several departments and agencies of the Federal Government, including the Atomic Energy Commission and the Department of Defense, and coordinate them with each other and with the activities of the States, their political subdivisions, and neighboring countries or political subdivisions thereof;

(c) Install, equip, staff, and operate centers of communication to provide: warnings of enemy attack by air or otherwise; direct, secondary or supplemental channels of communication to State, regional or local civil-defense centers or offices or any services; provide aid and assistance to the States or their political subdivisions by furnishing communications equipment; and provide assistance in the installation, maintenance and operation of communications necessary for civil defense or to meet or prepare for enemy attacks;

(d) Study and develop measures designed to afford adequate protection of life and property, including research and studies as to the best methods of treating the effects of attacks by atomic, radiological, chemical, bacteriological, biological, or other similar weapons and processes; developing shelter designs and materials for protective covering or construction; and developing equipment or facilities and effecting the standardization thereof to meet or prepare for enemy attacks;

(e) Educate, train, and instruct specialists, civil-defense workers public officials, and others as to the best methods of meeting or preparing for enemy attacks including the rescue and treatment of casualties, firefighting and fire control, plant protection, monitoring and other protective devices, and similar items and for this purpose to conduct or operate schools or classes, provide instructors and training aids as deemed necessary;

(f) Disseminate by all appropriate means to the States, their political subdivisions and the individual citizens, information con-

cerning the civil defense measures or methods adapted to prepare for or to meet enemy attacks;

(g) Assist in negotiating mutual aid agreements or compacts, as provided in section 5 of this Act, and to approve or join in such agreements or compacts on behalf of the Federal Government;

(h) Develop plans and programs with the States and their political subdivisions for the orderly evacuation and reception of the civilian population in the event of enemy attacks and to recommend that such plans and programs be placed in operation when deemed necessary;

(i) Procure, construct, lease, transport, store, maintain, repair, reprocess, recondition, renovate, and otherwise deal in supplies, medicines, equipment, mobile laboratories, materials, and facilities including land and buildings needed to prepare for or meet such attacks; and, in the event of an emergency or disaster resulting from enemy attacks, such transactions may be made without regard to the limitations of existing law, and on such terms and conditions, including advance payments, as the Administrator deems necessary;

(j) Make financial contributions to the States or their political subdivisions for the purpose of enabling such States or political subdivisions to conduct training programs and to procure, construct, transport, store, maintain, distribute, or renovate supplies, medicines, equipment, materials, and facilities including buildings to meet or prepare for such attacks. Such contributions may be made on such terms or conditions as the Administrator shall prescribe, including the method of purchase, the quality or specifications of the supplies, medicines, equipment, materials, or facilities, the method or manner of distributing, handling, storing, or transporting, the making of repairs or replacement of parts and other factors and care or treatment to assure the uniformity, availability and good condition of such supplies, medicines, equipment, materials, or facilities;

(k) Sell, lease, lend, transfer, or deliver, with or without compensation, as is deemed necessary by the Administrator, supplies, medicines, equipment, materials, and facilities to the States and their political subdivisions when deemed necessary to meet or prepare for enemy attacks;

(l) In the event of an emergency or disaster resulting from enemy attacks:

(1) Coordinate and direct the relief activities of the various departments and agencies of the United States as provided in section 6 hereof;

(2) Direct or approve, pursuant to State mutual aid agreements or compacts, the utilization of equipment, property, and employees of any State government or any political subdivision thereof outside such State to meet an emergency or disaster from enemy attacks which cannot be met or controlled by the State or political subdivision thereof threatened with or undergoing enemy attacks; to reimburse the State or the political subdivision thereof for the compensation paid to, and the transportation, subsistence and maintenance expenses of such employees during the time of the rendition of such aid or assistance outside the State; to pay fair and reasonable compensation for the equipment or property of the State government or any political subdivision thereof so utilized or consumed, including any transportation costs. Where the State or political subdivision pays or agrees to pay compensation to such employees for personal injury or death while engaged in rendering assistance outside the State on the same basis as though such employees were performing their duties in the State or political subdivision in which they are normally employed, the Administrator is authorized and directed to reimburse or pay the State or political subdivision for the compensation so paid or agreed to be paid. As used in this subsection, the term "employees" shall include full or part-time paid, volunteer, auxiliary, and civil-defense workers subject to the order or control of a State government or any political subdivision thereof.

SEC. 4. In exercising the authority granted under section 3 (j) and (k), the Administrator shall give consideration to the relative vulnerability of the State or political subdivision to attack; to whether the State or political subdivision is in a vital target area; to the population density; to the availability of State and local aid, materials and facilities, and of mutual aid from nearby States or areas; and to the total availability of funds, supplies, and materials; and other relevant factors

including the acceptance and application by the States of standards set by the Administrator.

SEC. 5. (a) The consent of Congress is hereby given to any two States or groups of States to negotiate and enter into agreements or compacts with each other and the Administrator for mutual aid outside the State limits to meet emergencies or disasters from enemy attacks which cannot be adequately met or controlled by the State or political subdivision thereof threatened with or undergoing such enemy attacks. Such agreements or compacts shall be limited to the exchange or furnishing of food, clothing, medicines, and other supplies; engineering services; emergency housing; police and constabulary services; National or State Guards under the control of the States; health, medical and related services; the evacuation or reception of civilian population; fire fighting, rescue, transportation, and construction services and equipment; personnel necessary to provide or conduct these services; and such other supplies, equipment, facilities, personnel, and services as may be needed; and on such terms and conditions as are deemed necessary.

(b) Any agreement or compact referred to above shall be entered into by the Governors of the States and by the Administrator acting for and on behalf of the Federal Government.

(c) The consent of Congress is also given for any one or more States to negotiate and enter into agreements or compacts with any neighboring State, province or similar political subdivision of a foreign country for mutual assistance into or out of the United States, to meet or prepare for enemy attacks, provided such agreements or compacts shall be limited to the provisions referred to above in section 5 (a) and provided further that such agreements or compacts are satisfactory to the Administrator and are approved by the Secretary of State on behalf of the United States, which approval shall permit the free exchange or transfer of equipment or property into or out of the United States on terms prescribed by the Administrator without regard to any other provisions of law.

(d) Nothing in this section shall be construed as preventing Congress from withdrawing at any time its consent to any compact or agreement made hereunder.

SEC. 6. In the event of any emergency or disaster in the United States, resulting from enemy attacks of any kind, the President may

transfer to the Administrator such portion of the unobligated appropriations of any Federal department or agency as he may deem necessary, and the sums so transferred shall be available for the purposes of this Act, under such terms and conditions as to donation, compensation, or return as may be prescribed, the President may also direct any Federal department or agency, and such departments and agencies are hereby authorized to provide:

(a) Their equipment, supplies, materials, facilities, personnel, and other resources to the Administrator or to the States or their political subdivisions;

(b) For the construction of temporary housing; and

(c) On public or private lands, protective and other work essential for the preservation of life and property, for clearing debris and wreckage, and for making emergency repairs to, and temporary replacement of, communications, hospitals, utilities, transportation facilities, or the public facilities of States or their political subdivisions damaged or destroyed by enemy attacks.

SEC. 7. For the purpose of carrying out his duties under this Act, the Administrator is authorized to:

(a) Employ civilian personnel for duty in the United States, including the District of Columbia, or elsewhere, subject to the civil service laws, and to fix the compensation of such personnel in accordance with the Classification Act of 1949 as amended; and subject to the standards and procedures of that Act, to place not more than twenty positions in grades 16, 17, and 18 of the General Schedule established by that Act, and any such positions shall be additional to the number authorized by section 505 of that Act;

(b) Utilize the services of Federal, State, and local agencies and to establish and utilize such regional, local, or other agencies, and to utilize such voluntary and uncompensated services by individuals or organizations as may from time to time be needed;

(c) Employ persons of outstanding experience and ability without compensation to the extent deemed necessary and appropriate to carry out the provisions of this Act and such persons may be allowed transportation and not to exceed $15 per diem in lieu of subsistence while away from their homes or regular places of business pursuant to such employment;

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(d) Employ experts and consultants or organizations thereof, as authorized by section 55 (a) title 5 of the United States Code. Individuals so employed may be compensated at rates not in excess of $50 per diem and while away from their homes or regular places of business they may be paid actual travel expense and not to exceed $15 per diem in lieu of subsistence and other expenses while so employed; provided that such contracts may be renewed annually;

(e) Provide by regulation for the exemption of persons employed or whose services are utilized under section 7 (b), (c), and (d) hereof from the operation of sections 281, 283, 284, 434, and 1914 of title 18 of the United States Code and section 190 of the Revised Statutes (5 U. S. C. 99);

(f) Notwithstanding any other provisions of law, accept gifts of funds, supplies, equipment, and facilities; and utilize or distribute same for civil-defense purposes in accordance with the provisions of this Act;

(g) Reimburse any Federal agency for any of its expenditures or for the utilization or consumption of its equipment, supplies, materials, facilities, and other resources under section 6 of this Act to the extent funds are available;

(h) Purchase such printing, binding, and blank-book work from public, commercial, or private printing establishments or binders as he may deem necessary upon orders placed by the Public Printer or upon waivers issued in accordance with section 12 of the Printing Act approved January 12, 1895, as amended;

(i) Prescribe such rules and regulations as may be necessary and proper to carry out any of the provisions of this Act, and to delegate any power, authority, or discretion conferred upon him by this Act to such officer or agency of the Federal Government as he may designate.

SEC. 8. (a) The Administrator shall establish such security requirements and safeguards including restrictions with respect to access to information and property, as he deems necessary. No employee of the Administration shall be permitted to have access to information or property with respect to which access restrictions have been established under this section, until the Federal Bureau of Investigation shall have made an investigation into the character, associations, and

loyalty of such individual and shall have reported the findings of said investigation to the Administrator and the Administrator shall have determined that permitting such individual to have access to such information or property will not endanger civil defense and security.

(b) No person shall be employed or associated in any capacity in any civil-defense organization established under this Act who advocates a change by force or violence in the constitutional form of Government of the United States or the overthrow of any government in the United States by force or violence, or who has been convicted of or is under indictment or information charging any subversive act against the United States. Each Federal employee of the Administration shall execute the loyalty oath or appointment affidavits prescribed by the Civil Service Commission. Each person other than a Federal employee who is appointed to serve in an organization for civil defense shall, before entering upon his duties, take an oath, in writing, before a person authorized to administer oaths, which oath shall be substantially as follows:

"I, ————, do solemnly swear (or affirm) that I will support and defend the Constitution of the United States against all enemies, foreign and domestic; that I will bear true faith and allegiance to the same; that I take this obligation freely, without any mental reservation or purpose of evasion; and that I will well and faithfully discharge the duties upon which I am about to enter.

"And I do further swear (or affirm) that I do not advocate, nor am I a member of any political party or organization that advocates the overthrow of the Government of the United States by force or violence; and that during such time as I am a member of the (name of civil-defense organization), I will not advocate nor become a member of any political party or organization that advocates the overthrow of the Government of the United States by force or violence."

SEC. 9. During an emergency or disaster resulting from enemy attacks, neither the Federal Government nor except in cases of willful misconduct, gross negligence or bad faith, any officer or employee thereof while complying with or attempting to comply with any provision of this Act or of any rule, regulation or order issued pursuant to this Act shall be liable to any person, whether or not such person is engaged in civil defense, for death, injury or property damage resulting therefrom.

SEC. 10. The functions and duties exercised under this Act shall be excluded from the operation of the Administrative Procedure Act (60 Stat. 237) except as to the requirements of section 3 thereof.

SEC. 11. The Administration shall assume and take over such functions of the Civil Defense Office of the National Security Resources Board, including the personnel assigned to that work, pertinent files, information, and as much of the appropriations available or to be made available for said functions, as the President may direct.

SEC. 12. In performing his duties, the Administrator shall utilize to the maximum extent the facilities and resources of the various departments and agencies of the Government.

SEC. 13. The provisions of this Act shall be applicable to the United States, its Territories, possessions and the District of Columbia, and their political subdivisions, and the term "States" shall include the District of Columbia, the Territories and possessions of the United States.

SEC. 14. There are hereby authorized to be appropriated such amounts as may be necessary to carry out the provisions of this Act. Funds made available for the purposes of this Act may be allocated or transferred for any of the purposes of this Act, with the approval of the Bureau of the Budget, to any agency designated to assist in carrying out this Act. Funds so allocated or transferred shall remain available for such period as may be specified in the Acts making such funds available.

SEC. 15. Nothing in this Act shall be construed to amend or modify the provisions of the Atomic Energy Act of 1946, as amended.

EXHIBIT D

Suggested Model State Civil Defense Act *

Title.—The title should conform to State requirements. The following is a suggestion:

"AN ACT Relating to the establishment of a civil defense agency and other organizations for civil defense within this State; granting certain executive powers with respect thereto and for related purposes."

Be it enacted, etc.—

Sec. 1. Short Title.—This Act may be cited as the "(name of State) Civil Defense Act of 1951."

Sec. 2. Policy and Purpose.—(a) Because of the existing and increasing possibility of the occurrence of disasters or emergencies of unprecedented size and destructiveness resulting from enemy attack, sabotage or other hostile action, and in order to insure that preparations of this State will be adequate to deal with such disasters or emergencies, and generally to provide for the common defense and to protect the public peace, health, and safety, and to preserve the lives and property of the people of the State, it is hereby found and declared to be necessary: (1) to create a State Civil Defense Agency, and to authorize the creation of local organizations for civil defense in the political subdivisions of the State; (2) to confer upon the Governor and upon the executive heads or governing bodies of the political subdivisions of the State the emergency powers provided herein; and (3) to provide for the rendering of mutual aid among the political subdivisions of the State, and with other States, and with the Federal Government with respect to the carrying out of civil defense functions; and (4) to authorize the establishment of such organizations and the taking of such steps as are necessary and appropriate to carry out the provisions of this Act.

(b) It is further declared to be the purpose of this Act and the policy of the State that all civil defense functions of this State be coordinated to the maximum extent with the comparable functions of the Federal Government including its various departments and agen-

*Based on legislation developed by the Council of State Governments in the period 1941 to 1948.

cies, of other States and localities, and of private agencies of every type, to the end that the most effective preparation and use may be made of the Nation's manpower, resources, and facilities for dealing with any disaster that may occur.

SEC. 3. DEFINITION.—As used in this Act the term "Civil Defense" shall mean the preparation for and the carrying out of all emergency functions, other than functions for which military forces or other Federal agencies are primarily responsible, to prevent, minimize, and repair injury and damage resulting from disasters caused by enemy attack, sabotage, or other hostile action, or by fire, flood, or other causes. These functions include, without limitation, fire-fighting services, police services, medical and health services, rescue, engineering, air raid warning services, communications, radiological, chemical and other special weapons defense, evacuation of persons from stricken areas, emergency welfare services (civilian war aid), emergency transportation, plant protection, temporary restoration of public utility services, and other functions related to civilian protection, together with all other activities necessary or incidental to the preparation for and carrying out of the foregoing functions.

SEC. 4. STATE CIVIL DEFENSE AGENCY.—(a) There is hereby created within the executive branch of the State Government a department (division) of Civil Defense (hereinafter called the "Civil Defense Agency") with a Director of Civil Defense (hereinafter called the "Director") who shall be the head thereof. The Director shall be appointed by the Governor with the advice and consent of the (usual ratifying body); he shall not hold any other State office; he shall hold office during the pleasure of the Governor and shall be compensated at the rate of $ per annum.

(b) The (Governor) (Director) may employ such technical, clerical, stenographic and other personnel (and fix their compensation) (when they are to be compensated) and may make such expenditures within the appropriation therefor, or from other funds made available to him for purposes of civil defense, as may be necessary to carry out the purposes of this Act.

(c) The Director and other personnel of the Civil Defense Agency shall be provided with appropriate office space, furniture, equipment, supplies, stationery and printing in the same manner as provided for personnel of other State agencies.

(d) The Director, subject to the direction and control of the Governor, shall be the executive head of the Civil-Defense Agency and shall be responsible to the Governor for carrying out the program for civil defense of this State. He shall coordinate the activities of all organizations for civil defense within the State, and shall maintain liaison with and cooperate with civil-defense agencies and organizations of other States and of the Federal Government, and shall have such additional authority, duties, and responsibilities authorized by this Act as may be prescribed by the Governor.

SEC. 5. CIVIL DEFENSE ADVISORY COUNCIL.—There is hereby created a Civil Defense Advisory Council (hereinafter called the "Council"), the members of which shall be appointed by the Governor. (Here insert further provisions as to membership, including number, and provisions for ratification as desired.) The Council shall advise the Governor and the Director on all matters pertaining to civil defense. The Governor shall serve as Chairman of the Council, and the members thereof shall serve without compensation, but may be reimbursed for their reasonable and necessary expenses incurred in the performance of their duties.

SEC. 6. CIVIL-DEFENSE POWERS OF THE GOVERNOR.—(a) The Governor shall have general direction and control of the Civil Defense Agency, and shall be responsible for the carrying out of the provisions of this Act, and in the event of disaster or emergency beyond local control, may assume direct operational control over all or any part of the civil-defense functions within this State.

(b) In performing his duties under this Act, the Governor is further authorized and empowered:

(1) To make, amend, and rescind the necessary orders, rules, and regulations to carry out the provisions of this Act with due consideration of the plans of the Federal Government.

(2) To prepare a comprehensive plan and program for the civil defense of this State, such plan and program to be integrated into and coordinated with the civil-defense plans of the Federal Government and of other States to the fullest possible extent, and to coordinate the preparation of plans and programs for civil defense by the political subdivisions of this State, such plans to be integrated into and coordinated with the civil-defense plan and program of this State to the fullest possible extent.

(3) In accordance with such plan and program for the civil defense of this State, to ascertain the requirements of the State or the political subdivisions thereof for food or clothing or other necessities of life in the event of attack and to plan for and procure supplies, medicines, materials, and equipment, and to use and employ from time to time any of the property, services, and resources within the State, for the purposes set forth in this Act; to make surveys of the industries, resources, and facilities within the State as are necessary to carry out the purposes of this Act; to institute training programs and public information programs, and to take all other preparatory steps, including the partial or full mobilization of civil defense organizations in advance of actual disaster, to insure the furnishing of adequately trained and equipped forces of civil defense personnel in time of need.

(4) To cooperate with the President and the heads of the Armed Forces, and the civil defense agency of the United States, and with the officers and agencies of other States in matters pertaining to the civil defense of the State and Nation and the incidents thereof; and in connection therewith, to take any measures which he may deem proper to carry into effect any request of the President and the appropriate Federal officers and agencies, for any action looking to civil defense, including the direction or control of (a) black-outs and practice black-outs, air-raid drills, mobilization of civil defense forces, and other tests and exercises, (b) warnings and signals for drills or attacks and the mechanical devices to be used in connection therewith, (c) the effective screening or extinguishing of all lights and lighting devices and appliances, (d) shutting off water mains, gas mains, electric power connections and the suspension of all other utility services, (e) the conduct of civilians and the movement and cessation of movement of pedestrians and vehicular traffic during, prior, and subsequent to drills or attack, (f) public meetings or gatherings; and (g) the evacuation and reception of the civilian population.

(5) To take such action and give such directions to State and local law enforcement officers and agencies as may be reasonable and necessary for the purpose of securing compliance with the provisions of this Act and with the orders, rules, and regulations made pursuant thereto.

(6) To employ such measures and give such directions to the State or local boards of health as may be reasonably necessary for the purpose of securing compliance with the provisions of this Act or with the findings or recommendations of such boards of health by reason of conditions arising from enemy attack or the threat of enemy attack or otherwise.

(7) To utilize the services and facilities of existing officers, and agencies of the State and of the political subdivisions thereof; and all such officers and agencies shall cooperate with and extend their services and facilities to the Governor as he may request.

(8) To establish agencies and offices and to appoint executive, technical, clerical, and other personnel as may be necessary to carry out the provisions of this Act including, with due consideration to the recommendation of the local authorities, full-time State and regional area directors.

(9) To delegate any authority vested in him under this Act, and to provide for the subdelegation of any such authority.

(10) On behalf of this State to enter into reciprocal aid agreements or compacts with other States and the Federal Government, either on a State-wide basis or local political subdivision basis or with a neighboring State or province of a foreign country. Such mutual aid arrangements shall be limited to the furnishing or exchange of food, clothing, medicine, and other supplies; engineering services; emergency housing; police services; National or State Guards while under the control of the State; health, medical and related services; fire fighting, rescue, transportation, and construction services and equipment; personnel necessary to provide or conduct these services; and such other supplies, equipment, facilities, personnel, and services as may be needed; the reimbursement of costs and expenses for equipment, supplies, personnel, and similar items for mobile support units, fire fighting, and police units and health units; and on such terms and conditions as are deemed necessary.

(11) To sponsor and develop mutual aid plans and agreements between the political subdivisions of the State, similar to the mutual aid arrangements with other States referred to above.

Sec. 7. Emergency Powers.—In the event of actual enemy attack against the United States the Governor, with the advice and consent

of the Civil Defense Advisory Council, may declare that a state of emergency exists, and thereafter the Governor shall have and may exercise for such period as such state of emergency exists or continues, the following additional emergency powers:

(a) To enforce all laws, rules, and regulations relating to civil defense and to assume direct operational control of all civil defense forces and helpers in the State;

(b) To seize, take, or condemn property for the protection of the public or at the request of the President, the Armed Forces or the civil defense agency of the United States including:

(1) All means of transportation and communication;

(2) All stocks of fuel of whatever nature;

(3) Food, clothing, equipment, materials, medicines, and all supplies; and

(4) Facilities including buildings and plants;

(c) To sell, lend, give, or distribute all or any such property among the inhabitants of the State and to account to the State treasurer for any funds received for such property;

(d) To make compensation for the property so seized, taken, or condemned on the following basis:

(1) In case property is taken for temporary use, the Governor, within ten days of the taking, shall fix the amount of compensation to be paid therefor; and in case such property shall be returned to the owner in a damaged condition or shall not be returned to the owner, the Governor shall fix within ten days the amount of compensation to be paid for such damage or failure to return. Whenever the Governor shall deem it advisable for the State to take title to property taken under this section, he shall forthwith cause the owner of such property to be notified thereof in writing by registered mail, postage prepaid, and forthwith cause to be filed a copy of said notice with the (secretary of state).

(2) (Insert procedural provisions for determination of amount payable if owner refused to accept the amount of compensation fixed by the governor.) [Each State authority should check State constitutional provisions in regard to the seizure or condemnation of property and the compensation therefor to be certain that the suggested provisions are not in violation of the Constitution.]

(e) To perform and exercise such other functions, powers, and duties as may be deemed necessary to promote and secure the safety and protection of the civilian population.

Sec. 8. Mutual Aid Arrangements.—The director of each local organization for civil defense may develop or cause to be developed mutual-aid arrangements with other public and private agencies within this State for reciprocal civil defense aid and assistance in case of disaster too great to be dealt with unassisted. Such arrangements shall be consistent with the State civil defense plan and program, and in time of emergency it shall be the duty of each local organization for civil defense to render assistance in accordance with the provisions of such mutual-aid arrangements.

The director of each local organization for civil defense may assist in negotiation of reciprocal mutual-aid agreements between the governor and the adjoining States (including foreign states or provinces) or political subdivisions thereof, and shall carry out arrangements or any such agreement relating to the local and political subdivision.

Sec. 9. Local Organization for Civil Defense.—(a) Each political subdivision of this State is hereby authorized and directed to establish a local organization for civil defense in accordance with the State civil-defense plan and program. (The term "political subdivision" should be defined at this point to indicate whether the State is to be organized on a county, town, regional, or municipal basis.) The executive officer or governing body of the political subdivision is authorized to appoint a Director who shall have direct responsibility for the organization, administration and operation of such local organization for civil defense, subject to the direction and control of such executive officer or governing body. Each local organization for civil defense shall perform civil-defense functions within the territorial limits of the political subdivision within which it is organized, and, in addition, shall conduct such functions outside of such territorial limits as may be required pursuant to the provisions of this Act.

(b) Each political subdivision shall have the power and authority:

(1) To appropriate and expend funds, make contracts, obtain and distribute equipment, materials, and supplies for civil-defense purposes; provide for the health and safety of persons and property, including emergency assistance to the victims of any disaster resulting from enemy attack; and to direct and coordinate the

development of civil-defense plans and programs in accordance with the policies and plans set by the Federal and State civil-defense agencies;

(2) To appoint, employ, remove, or provide, with or without compensation, air-raid wardens, rescue teams, auxiliary fire and police personnel, and other civilian-defense workers;

(3) To establish a primary and one or more secondary control centers to serve as command posts during an emergency;

(4) Subject to the order of the Governor, or the chief executive of the political subdivision, to assign and make available for duty, the employees, property, or equipment of the subdivision relating to fire fighting, engineering, rescue, health, medical and related services, police, transportation, construction, and similar items or services for civil-defense purposes and within or outside of the physical limits of the subdivision; and

(5) In the event of enemy attack or state of emergency as provided in section 7 to waive procedures and formalities otherwise required by law pertaining to: the performance of public work, entering into contracts, the incurring of obligations, the employment of permanent and temporary workers, the utilization of volunteer workers, the rental of equipment, the purchase and distribution with or without compensation of supplies, materials, and facilities, and the appropriation and expenditure of public funds.

Sec. 10. Local Services.—(a) Whenever the employees of any political subdivision are rendering outside aid pursuant to the authority contained in section 9 hereof such employees shall have the same powers, duties, rights, privileges, and immunities as if they were performing their duties in the political subdivisions in which they are normally employed.

(b) The political subdivision in which any equipment is used pursuant to this section shall be liable for any loss or damage thereto and shall pay any expense incurred in the operation and maintenance thereof. No claim for such loss, damage, or expense shall be allowed unless, within sixty days after the same is sustained or incurred, an itemized notice of such claim under oath is served by mail or otherwise upon (the chief fiscal officer) of such political subdivision where the equipment was used. The political subdivision which is aided pur-

suant to this section shall also pay and reimburse the political subdivision furnishing such aid for the compensation paid to employees furnished under this section during the time of the rendition of such aid and shall defray the actual traveling and maintenance expenses of such employees while they are rendering such aid. Such reimbursement shall include any amounts paid or due for compensation due to personal injury or death while such employees are engaged in rendering such aid. The term "employee" as used in this section shall mean, and the provisions of this section shall apply with equal effect to, paid, volunteer, auxiliary employees, and civil-defense workers.

(c) The foregoing rights, privileges, and obligations shall also apply in the event such aid is rendered outside the State, provided that payment or reimbursement in such case shall or may be made by the State or political subdivision receiving such aid pursuant to a reciprocal mutual-aid agreement or compact with such State or by the Federal Government.

SEC. 11. MOBILE SUPPORT UNITS.—(a) The Governor, or the Director at the request of the Governor, is authorized to create and establish such number of mobile support units as may be necessary to reinforce civil-defense organizations in stricken areas and with due consideration of the plans of the Federal Government and of other States. He shall appoint a commander for each such unit who shall have primary responsibility for the organization, administration, and operation of such unit. Mobile support units shall be called to duty upon orders of the Governor or the Director and shall perform their functions in any part of the State or, upon the conditions specified in this section, in other States.

(b) Personnel of mobile support units while on duty, whether within or without the State, shall: (1) if they are employees of the State, have the powers, duties, rights, privileges, and immunities and receive the compensation incidental to their employment; (2) if they are employees of a political subdivision of the State, and whether serving within or without such political subdivision, have the powers, duties, rights, privileges, and immunities and receive the compensation incidental to their employment; and (3) if they are not employees of the State or a political subdivision thereof, be entitled to compensation by the State at $—— per day (suggested rate be equivalent to rate of compensation paid to jurors in State courts) and to the same rights and

immunities as are provided by law for the employees of this State. All personnel of mobile support units shall, while on duty, be subject to the operational control of the authority in charge of civil defense activities in the area in which they are serving, and shall be reimbursed for all actual and necessary travel and subsistence expenses.

(c) The State shall reimburse a political subdivision for the compensation paid and actual and necessary travel, subsistence, and maintenance expenses of employees of such political subdivision while serving as members of a mobile support unit, and for all payments for death, disability, or injury of such employees incurred in the course of such duty, and for all losses of or damage to supplies and equipment of such political subdivision resulting from the operation of such mobile support unit.

(d) Whenever a mobile support unit of another State shall render aid in this State pursuant to the orders of the Governor of its home State and upon the request of the Governor of this State, this State shall reimburse such other State for the compensation paid and actual and necessary travel, subsistence, and maintenance expenses of the personnel of such mobile support unit while rendering such aid, and for all payments for death, disability, or injury of such personnel incurred in the course of rendering such aid, and for all losses of or damage to supplies and equipment of such other State or a political subdivision thereof resulting from the rendering of such aid: *Provided,* That the laws of such other State contain provisions substantially similar to this section or that provisions to the foregoing effect are embodied in a reciprocal mutual-aid agreement or compact or that the Federal Government has authorized or agreed to make reimbursement for such mutual aid as above provided.

(e) No personnel of mobile support units of this State shall be ordered by the Governor to operate in any other State unless the laws of such other State contain provisions substantially similar to this section or unless the reciprocal mutual aid agreements or compacts include provisions providing for such reimbursement or unless such reimbursement will be made by the Federal Government by law or agreement.

Sec. 12. Investigations and Surveys.—For the purpose of making surveys and investigations and obtaining information, except the investigation of subversive activities that are the responsibility of the Federal Bureau of Investigation, the Governor may compel by subpoena

the attendance of witnesses, and the production of books, papers, records, and documents of individuals, firms, associations, and corporations; and all officers, boards, commissions, and departments of the State, and the political subdivisions thereof, having information with respect thereto, shall cooperate with and assist him in making such investigations and surveys.

SEC. 13. TRAFFIC CONTROL.—The Governor may formulate and execute plans and regulations for the control of traffic in order to provide for the rapid and safe movement of evacuation over public highways and streets of people, troops, or vehicles and materials for national defense or for use in any defense industry, and may coordinate the activities of the departments or agencies of the State and of the political subdivisions thereof concerned directly or indirectly with public highways and streets, in a manner which will best effectuate such plans.

SEC. 14. LEASE OR LOAN OF STATE PROPERTY; TRANSFER OF STATE PERSONNEL.—Notwithstanding any inconsistent provision of law:

(a) Whenever the Governor deems it to be in the public interest, he may—

(1) Authorize any department or agency of the State to lease or lend, on such terms and conditions as he may deem necessary to promote the public welfare and protect the interests of the State, any real or personal property of the State government to the President, the heads of the Armed Forces, or to the civil defense agency of the United States.

(2) Enter into a contract on behalf of the State for the lease or loan to any political subdivision of the State on such terms and conditions as he may deem necessary to promote the public welfare and protect the interests of the State, of any real or personal property of the State government, or the temporary transfer or employment of personnel of the State government to or by any political subdivision of the State.

(b) The (chief executive) of each political subdivision of the State may—

(1) Enter into such contract or lease with the State, or accept any such loan, or employ such personnel, and such political subdivision may equip, maintain, utilize, and operate any such property and employ necessary personnel therefor in accordance with the purposes for which such contract is executed;

(2) Do all things and perform any and all acts which he may deem necessary to effectuate the purpose for which such contract was entered into.

(The term "political subdivision" should be defined in this section in terms consistent with section 9.)

SEC. 15. ORDERS, RULES, AND REGULATIONS.—(a) The political subdivisions of the State (as herein defined) and other agencies designated or appointed by the Governor are authorized and empowered to make, amend, and rescind such orders, rules, and regulations as may be necessary for civil defense purposes and to supplement the carrying out of the provisions of this Act, but not inconsistent with any orders, rules, or regulations promulgated by the Governor or by any State agency exercising a power delegated to it by him.

(b) All orders, rules, and regulations promulgated by the Governor, or by any political subdivision or other agency authorized by this Act to make orders, rules, and regulations, shall have the full force and effect of law, when, in the event of issuance by the Governor, or any State agency, a copy thereof is filed in the Office of the Secretary of State, or, if promulgated by a political subdivision of the State or agency thereof, when filed in the office of the clerk of the political subdivision or agency promulgating the same. All existing laws, ordinances, rules, and regulations inconsistent with the provisions of this Act, or of any order, rule, or regulation issued under the authority of this Act, shall be suspended during the period of time and to the extent that such conflict exists.

(c) In order to attain uniformity so far as practicable throughout the country in measures taken to aid civil defense, all action taken under this Act and all orders, rules, and regulations made pursuant thereto, shall be taken or made with due consideration to the orders, rules, regulations, actions, recommendations, and requests of Federal authorities relevant thereto and, to the extent permitted by law, shall be consistent with such orders, rules, regulations, actions, recommendations and requests.

SEC. 16. ENFORCEMENT.—The law enforcing authorities of the State and of the political subdivisions thereof shall enforce the orders, rules, and regulations issued pursuant to this Act.

SEC. 17. IMMUNITY.—(a) Neither the State nor any political subdivision of the State, nor the agents or representatives of the State or

any political subdivision thereof, shall be liable for personal injury or property damage sustained by any person appointed or acting as a volunteer civilian defense worker, or member of any agency engaged in civilian defense activity. The foregoing shall not affect the right of any person to receive benefits or compensation to which he might otherwise be entitled under the workmen's compensation law or section 10 hereof or any pension law or any Act of Congress.

(b) Neither the State nor any political subdivision of the State nor, except in cases of wilful misconduct, gross negligence, or bad faith, the employees, agents, or representatives of the State or any political subdivision thereof, nor any volunteer or auxiliary civilian defense worker or member of any agency engaged in any civilian defense activity, complying with or reasonably attempting to comply with this Act, or any order, rule, or regulation promulgated pursuant to the provisions of this Act, or pursuant to any ordinance relating to blackout or other precautionary measures enacted by any political subdivision of the State, shall be liable for the death of or injury to persons, or for damage to property, as a result of any such activity.

SEC. 18. AUTHORITY TO ACCEPT SERVICES, GIFTS, GRANTS, AND LOANS.—(a) Whenever the Federal Government or any agency or officer thereof shall offer to the State, or through the State to any political subdivision thereof, services, equipment, supplies, materials, or funds by way of gift, grant, or loan, for purposes of civil defense, the State, acting through the Governor, or such political subdivision, acting with the consent of the Governor and through its executive officer or governing body, may accept such offer and upon such acceptance the Governor of the State or executive officer or governing body of such political subdivision may authorize any officer of the State or of the political subdivision, as the case may be, to receive such services, equipment, supplies, materials, or funds on behalf of the State or such political subdivision, and subject to the terms of the offer and the rules and regulations, if any, of the agency making the offer.

(b) Whenever any person, firm, or corporation shall offer to the State or to any political subdivision therof, services, equipment, supplies, materials, or funds by way of gift, grant, or loan, for purpose of civil defense, the State, acting through the Governor, or such political subdivision, acting through its executive officer or governing body, may accept such offer and upon such acceptance the Governor of the State

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or executive officer or governing body of such political subdivision may authorize any officer of the State or of the political subdivision, as the case may be, to receive such services, equipment, supplies, materials, or funds on behalf of the State or such political subdivision, and subject to the terms of the offer.

SEC. 19. POLITICAL ACTIVITY PROHIBITED.—No organization for civil defense established under the authority of this Act shall participate in any form of political activity, nor shall it be employed directly or indirectly for political purposes.

SEC. 20. CIVIL DEFENSE PERSONNEL.—No person shall be employed or associated in any capacity in any civil defense organization established under this Act who advocates a change by force or violence in the constitutional form of the Government of the United States or in this State or the overthrow of any government in the United States by force or violence, or who has been convicted of or is under indictment or information charging any subversive act against the United States. Each person who is appointed to serve in an organization for civil defense shall, before entering upon his duties, take an oath, in writing, before a person authorized to administer oaths in this State, which oath shall be substantially as follows:

> "I ————, do solemnly swear (or affirm) that I will support and defend the Constitution of the United States and the constitution of the State of ————, against all enemies, foreign and domestic; that I will bear true faith and allegiance to the same; that I take this obligation freely, without any mental reservation or purpose of evasion; and that I will well and faithfully discharge the duties upon which I am about to enter.
>
> "And I do further swear (or affirm) that I do not advocate, nor am I a member of any political party or organization that advocates, the overthrow of the Government of the United States or of this State by force or violence; and that during such time as I am a member of the (name of civil defense organization) I will not advocate nor become a member of any political party or organization that advocates the overthrow of the Government of the United States or of this State by force or violence."

SEC. 21. PENALTIES.—Any person violating any provision of this Act or any rule, order, or regulation made pursuant to this Act shall,

upon conviction thereof, be punishable by a fine not exceeding $ or imprisonment for not exceeding —— days or both.

Sec. 22. Liberality of Construction.—This Act shall be construed liberally in order to effectuate its purposes.

Sec. 23. Severability.—If any provision of this Act or the application thereof to any person or circumstance is held invalid, such invalidity shall not affect other provisions or applications of the Act which can be given effect without the invalid provision or application, and to this end the provisions of this Act are declared to be severable.

Sec. 24. (Authorization for) Appropriation.—(Here provide for necessary appropriation.)

Sec. 25. Effective Date.—(Insert appropriate phrase to make Act effective upon passage and approval.)

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